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No. 341

United States Court of Appeals

FOR THE THIRD CIRCUIT

No. 12,069

MICHIGAN CONSOLIDATED GAS COMPANY, a corporation,
Petitioner

v.

FEDERAL POWER COMMISSION

No. 12,118

THE CENTRAL WEST UTILITY COMPANY

v.

FEDERAL POWER COMMISSION

On Appeal from Orders of the Federal Power Commission

JOINT APPENDIX

Volume I

Record pages 5-9175; Joint Appendix pages 1-600

(Docket Entries and Excerpts from Transcript of Testimony)

PRESS OF BYRON S. ADAMS, WASHINGTON, D. C.

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JOINT APPENDIX

Volume I

(Docket Entries and Excerpts from Transcript of Testimony)

DOCKET ENTRIES

Chronological Statement of Relevant Docket Entries Below in Compliance With This Court's Rule 24(2)(e)

Date	Description	Reference[1]
6/11/51	Application of Panhandle for a certificate of public convenience and necessity, Docket No. G-1705	R. 17,621
7/ 2/51	Petition of Michigan Consolidated for leave to intervene, Docket No. G-1705	R. 17,663
8/14/51	Commission-approved telegram in Docket No. G-1705	R. 17,665
5/18/54	Application of Panhandle for certificate of public convenience and necessity, Docket No. G-2433	R. 17,666*
6/ 1/54	Petition of City of Detroit for leave to intervene, Docket No. G-2433	R. 17,905
6/10/54	Application of Panhandle for a temporary certificate	R. 17,910
6/17/54	Petition of Wayne County, Michigan for leave to intervene, Docket No. G-2433	R. 17,927
6/17/54	Petition of Central West Utility Company to intervene in Docket No. G-2433	R. 17,931*
6/21/54	Petition of Gas Service Company for leave to intervene in Docket No. G-2433	R. 17,955*
6/21/54	Petition of Michigan Consolidated for leave to intervene, Docket No. G-2433	R. 17,985*

[1] All references are to the pages of the Commission's certificate of the transcript of record to this Court and those documents which are printed in this Joint Appendix are designated with an asterisk (*).

Date	Description	Reference [1]
6/25/54	Notice of intervention of Michigan Public Service Commission, Docket No. G-2433	R. 17,998*
6/30/54	Answer of Panhandle Eastern to petition of Central West for leave to intervene	R. 18,004*
6/30/54	Panhandle's answer to Michigan Consolidated's petition to intervene, Docket No. G-2433	R. 18,017
7/ 2/54	Answer and objection to application of Panhandle for a temporary certificate	R. 18,025
7/ 2/54	Panhandle's application for authorization to export natural gas, Docket No. G-2475	R. 18,040*
7/19/54	Petition of Wayne County, Michigan for leave to intervene, Docket No. G-2475	R. 18,108
7/28/54	Petition of Union Gas Company for leave to intervene, Docket No. G-2475	R. 18,112
7/30/54	Application of Panhandle for the issuance of a temporary certificate	R. 18,139
8/ 6/54	Answer and objection of Michigan Consolidated to application of Panhandle for a temporary certificate	R. 18,166*
8/11/54	Petition of City of Detroit for leave to intervene, Docket No. G-2475	R. 18,181
8/30/54	Petition of Michigan Consolidated for leave to intervene, Docket No. G-2475	R. 18,185*

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Date	Description	Reference [1]
8/30/54	Notice of intervention of Michigan Public Service Commission, Docket No. G-2475	R. 18,202*
9/ 2/54	Telegram sent to Panhandle granting temporary authority to construct	R. 18,206
10/ 1/54	Application of Michigan Consolidated for rescission of certificate	R. 18,223*
10/29/54	Commission's order denying applications for rescission	R. 18,255
11/ 2/54	Order permitting intervention, Docket Nos. G-2433, *et al.*	R. 18,256*
11/ 2/54	Order consolidating proceedings, fixing date of hearing and specifying procedure, Docket Nos. G-2433, *et al.*	R. 18,259*
12/ 2/54	Application of Panhandle for temporary authorization	R. 18,302*
12/ 6/54	Telegram from Michigan Consolidated objecting to application	R. 18,317*
12/ 9/54	Answer and objection of Michigan Consolidated to application of Panhandle for temporary authorization	R. 18,318*
12/22/54	Order granting temporary authorization to operate facilities, Docket Nos. G-2433, *et al.*	R. 18,342*
1/ 5/55	Presiding Examiner's report to the Commission of motion to dismiss, Docket No. G-2433	R. 18,394

[1] All references are to the pages of the Commission's certificate of the transcript of record to this Court and those documents which are printed in this Joint Appendix are designated with an asterisk (*).

Date	Description	Reference [1]
1/11/55	Presiding Examiner's report to the Commission of motion to dismiss, Docket No. G-2475	R. 18,411*
1/20/55	Order denying motions to dismiss proceedings	R. 18,427*
2/10/55	Order permitting intervention in certain proceedings	R. 18,441
3/25/55	Panhandle's application for certificate of public convenience and necessity, Docket No. G-8665	R. 18,489
4/11/55	Petition of Michigan Consolidated for leave to intervene, Docket No. G-8665	R. 18,607*
5/ 2/55	Notice of intervention of Michigan Public Service Commission, Docket No. G-8665	R. 18,632*
6/27/55	Order consolidating and reconvening proceedings and specifying procedure, Docket Nos. G-2433, *et al.*	R. 18,776*
6/27/55	Order permitting interventions, Docket Nos. G-8665, *et al.*	R. 18,779*
8/10/55	Application for temporary certificate by Panhandle	R. 18,814
8/22/55	Motion to dismiss and answer of Central West to Panhandle application for temporary authority, etc.	R. 18,864*
10/ 5/55	Order granting in part and denying in part applications for temporary certificate, Docket Nos. G-2433, *et al.*	R. 18,900*

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Date	Description	Reference[1]
10/14/55	Letter from Panhandle accepting temporary certificate	R. 18,913
10/27/55	Letter from Panhandle submitting 41 new service agreements	R. 18,914
3/ 6/56	Decision of Presiding Examiner	R. 19,233*
4/ 5/56	Exceptions of Michigan Consolidated to Presiding Examiner's Desion	R. 19,532*
4/ 5/56	Exceptions of Panhandle to Presiding Examiner's Decision	R. 19,552
4/ 5/56	Exceptions of Staff Counsel to Presiding Examiner's Decision	R. 19,614*
4/ 5/56	Exceptions of Union Gas Company to Presiding Examiner's Decision	R. 19,634
4/13/56	Exceptions of City of Detroit to Presiding Examiner's Decision	R. 19,673
4/17/56	Order fixing date for oral argument	R. 19,712
5/18/56	Order severing proceedings	R. 19,773*
6/30/56	Opinion No. 292 and accompanying order	R. 19,788*
7/30/56	Application of Central West for rehearing	R. 19,840*
7/30/56	Application of County of Wayne, Michigan for rehearing	R. 19,871
7/30/56	Application of City of Detroit for rehearing	R. 19,886
7/30/56	Application of Michigan Consolidated for rehearing	R. 19,893*
8/23/56	Order denying applications for rehearing	R. 19,915*

[1] All references are to the pages of the Commission's certificate of the transcript of record to this Court and those documents which are printed in this Joint Appendix are designated with an asterisk (*).

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EXCERPTS FROM TRANSCRIPT OF TESTIMONY

PROCEEDINGS

* * * * * * * * * * * *

This is a public hearing held pursuant, one, to an order of the Commission consolidating proceedings and fixing date of hearing inter alia, issued November 2, 1954, in Docket Nos. G-1705, G-1937, G-2433, G-2475, G-2057, G-2932, and G-3159; two, orders consolidating the proceedings first above mentioned inter alia, issued November 2, 1954, and December 22, 1954; and three, notices of postponement of hearing dated November 8, 1954, and November 16, 1954. In Docket No. G-1705, Panhandle filed an application for a certificate of public convenience and necessity pursuant to Section 7 of the Natural

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Gas Act authorizing the construction and operation of facilities which would raise the maximum capacity of its main line from 550,000 Mcf to 600,000 Mcf.

The Commission granted temporary authorization for this project on August 14, 1951, but no hearing thereon has as yet been held.

In Docket No. G-2433, Panhandle filed an application for a certificate of public convenience and necessity authorizing the construction and operation of facilities proposed to increase its peak day sales of deliverability by 455,000 Mcf per day. By temporary authorization dated September 2, 1954, and by order issued December 22, 1954, the Commission granted temporary authorization for the construction and operation of facilities permitting an increase of 100,000 Mcf.

Included in the application in Docket No. G-2433 is a request for authorization to construct and operate facil-

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ities which would increase the capacity of certain of Panhandle's laterals.

Docket No. G-1937, as to which the Commission heretofore granted a rehearing, involves a certain lateral serving Indiana Gas and Water Company.

In Docket No. G-2475, Panhandle has applied for authorization pursuant to Section 3 of the Natural Gas Act for the export of up to 15,500,000 Mcf of gas per year to Union Gas Company of Canada, Ltd.

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The following proceedings involve applications for a certificate of public convenience and necessity pursuant to Section 7 of the Natural Gas Act authorizing the sale of natural gas to Panhandle. Docket Nos. G-4308, G-4309, G-4310, G-4314, G-4315, G-4316, and G-4328. The following proceedings involve applications pursuant to Section 7-A of the Act by applicants seeking service from Panhandle, Docket Nos. G-2057, G-2932, G-3159, G-4611, G-4666, G-4940, G-5139, and G-5979.

The hearing is held before Howell Purdue, one of the Commission's Examiners, after due notice to all interested parties as evidenced by the four memoranda to the Secretary which I now hand you, Mr. Reporter, and request that you incorporate in the transcript as though read.

November 9, 1954

In the Matters of: Panhandle Eastern Pipe Line Company, et al. Docket Nos. G-1705, G-1937, G-2433, G-2475, G-1813, G-2023, G-2057, G-2932 and G-3159.

MEMORANDUM FOR THE PRESIDING OFFICER:

The record in the Office of the Secretary shows that notice of the hearing scheduled to commence on November 15, 1954, in the above-entitled matters was published in the

Federal Register on November 6, 1954; 19 FR; pp-7244-45, and was sent on November 2, 1954, to the parties and interested persons of record and to States or other governmental authorities deemed

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to have an official interest in the proceeding.

/s/ J. H. GUTRIDE
Secretary

November 23, 1954

In the Matter of:
Panhandle Eastern Pipe Line Company, et al.
Docket Nos. G. 1705, et al.

MEMORANDUM FOR THE PRESIDING OFFICER:

The record in the Office of the Secretary shows that notice of the hearing scheduled to commence on November 30, 1954, in the above-entitled matter was published in the Federal Register on November 17, 1954, 19 FR p. 7420, and was sent on November 9, 1954, to the parties and interested persons of record and to States or other governmental authorities deemed to have an official interest in the proceeding.

/s/ LEON M. FUQUAY
Secretary

November 24, 1954

In the Matter of:
Panhandle Eastern Pipe Line Company, et al.
Docket Nos. G-1705, et al.

MEMORANDUM FOR THE PRESIDING OFFICER:

The record in the Office of the Secretary shows that notice of the hearing scheduled to commence on January

4, 1955, in the above-entitled matter was published in the Federal Register on November 23, 1954, 19 FR p. 7544, and was sent on November 17, 1954, to the parties and interested persons of

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record and to States or other governmental authorities deemed to have an official interest in the proceeding.

/s/ LEON M. FUQUAY
Secretary

December 30, 1954

In the Matter of:
Panhandle Eastern Pipe Line Company, et al.
Docket Nos. G-1705, et al.

MEMORANDUM FOR THE PRESIDING OFFICER:

The record in the Office of the Secretary shows that notice of the hearing scheduled to commence on January 4, 1955, in the above-entitled matter was published in the Federal Register on December 29, 1954, 19 FR, pp. 9300-3, and was sent on December 22, 1954, to the parties and interested persons of record and to States or other governmental authorities deemed to have an official interest in the proceeding.

/s/ LEON M. FUQUAY
Secretary

* * * * * * * * * *

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Mr. Shannon: Mr. Examiner, this application has been on file since May 18 last year, some 7 months ago. We as intervenors were furnished copies of all of the exhibits filed in connection with the application, which, as you know, are quite complete under the new rules, which contem-

plate that an applicant who files an application be ready to go forward promptly.

We spent considerable time in analyzing these exhibits on the assumption that this represented a bona fide application by Panhandle. We have heard a great deal about this large expansion program that we have been promised for such a long time, particularly in connection with their rates, and they finally filed it.

Now they asked for and obtained two postponements of the hearing. Then we come up into December. They file a motion in which they announce they are not going to prosecute this

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application, that they have decided—which is not explained—that instead of adding capacity on Panhandle's main line, they have decided again not to expand that, that should be postponed, and they are not going to prosecute that but instead, they are going to expand Trunkline.

It appears, however, from their motion, that Trunkline doesn't have the gas and is having difficulty obtaining the gas in the light of the Phillips decision. So they have abandoned that portion of their application they have had on file since May and substituted a proposal for a program which may or may not work out.

In this motion they very candidly said, and anyone who examined these exhibits will certainly agree, that this change requires a revision of all of their exhibits and they asked for a deferment of the hearing for a month to permit that to be done.

Now, we have a situation, Mr. Examiner, when we have a hearing here on an application that the company filing it is no longer proposing it. I submit we should not be subjected, and the rules certainly do not contemplate, a procedure under which, after an application has been on file for seven months, we come up two or three days be-

fore the hearing is to start, and are told that this is no longer the proposal of the company.

We will simply be wasting time here, Mr. Examiner, in taking evidence on an application which this company doesn't

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intend to prosecute.

The rules are quite specific with respect to amendments of applications. It can not be made later than I think it is five or ten days prior to the commencement of the hearing, without an order permitting it to be done.

We have here, in fact, an amendment which has not been authorized, which has not been supported by exhibits, and we are told now that we are going to be given prepared over the week-end. We have just wasted seven months. That is not proper procedure.

Mr. Examiner, I submit that this going into the Waverly storage field, this going into markets, is all beside the point. The central question of one of these certificate cases is gas supply. And you have that situation. Panhandle itself urged that in the American Louisiana case just concluded. The Commission put gas supply down first.

We have just completed detailed hearings on the market requirements on this system. We would simply be spinning our wheels here, duplicating testimony taken within the last eight or ten months, to go into market requirements of these customers. The question is: Do they have the gas supply? Did they have it originally when they filed this application? I mean, behind the Panhandle expansion? Do they still have it?

If they still have it, why do they substitute a proposal to get gas from Trunkline, that Trunkline, according to their

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own motion, doesn't have.

In view of those circumstances, Mr. Examiner, and the fact that the Commission has denied their request for a postponement of the hearing, and of course the Examiner is not in a position in the light of that ruling to undertake to grant a postponement and yet that is what Mr. Miller contemplates—he says he is going to work his way along and get his postponement while we sit around here and be confronted with a lot of new exhibits we have never seen before.

I submit the only practical program to be followed, and I now move, I ask that the Examiner certify this motion to the Commission, that Panhandle's application in Docket G-2433 be dismissed for lack of prosecution, with the direction that Panhandle file an amended application limited to the 100 million feet of capacity for which they got temporary authorization to construct and operate without having any hearing.

I ask that that motion be submitted to the Commission for its consideration and that further proceedings here be terminated pending action by the Commission on that matter. I submit that it is clear from the Commission's action here that the Commission wants this application straightened out as filed.

If they had thought that Panhandle should be permitted to adopt the procedure that they have now embarked upon, they would have granted Panhandle's request for a deferment. They

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denied that request.

This application has been on file for seven months. On the basis of this application, they received authorization without a hearing and over our objection, to spend some $23 million to put in 100 million feet of capacity, and

they also received authority to operate that without a hearing.

Commissioner Smith in a concurring opinion pointed out that under the circumstances there wasn't anything else the Commission could do. I submit all those things considered together, that the most logical and proper procedure would be to submit this matter to the Commission and get rid of this application here, which doesn't represent anything more now than a lot of pieces of paper, and on which we have spent a lot of time, apparently wasted time, since Panhandle is no longer proposing to prosecute this application.

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Mr. Shannon: Mr. Examiner, since I am making the motion,

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may I just be heard very briefly?

I think we have something fundamental here in that the Commission would never approve a procedure as the establishment of a precedent under which an applicant could file an application, have everyone proceed on the basis that they really mean it, and have it there for seven months and give two postponements, and then come in three or four days before the hearing starts, and say "Well, we don't really mean it."

This isn't just a matter of a minor amendment to conform to the evidence, as Mr. Miller subbests. That contemplates a situation where you change the size of pipe or something like that.

This is a major change. They are taking out 155 million of the 255 million of proposed pipeline expansion—over half of the expansion—nearly two-thirds of it is being deleted. They propose to substitute an expansion of Trunk-

line that has not been filed and which they themselves have told us within the last few days Trunkline doesn't have the gas for, and may or may not get the gas for.

We have got an entirely different proposition here. Instead of a 455 million feet a day, we wind up with 100 million feet a day—less than one fourth—that we have been hearing about for eight or nine months. That is what we have here. As far as getting the proceedings expedited, I want to expedite the proceedings, too.

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But the fact remains that you can't have one of these proceedings start, and you certainly can't have it stay on the track, unless you have got an application that represents the proposal of the company, because the Commission has got to find under the statute that the applicant is willing to do what is proposed, what is covered by the application.

There are notice requirements here that have to be complied with, and the statute so contemplates, and they certainly are not complied with when, after seven months, we come in here and we are told that we are going to be handed out on a piecemeal basis, new revised exhibits we haven't even seen, and testimony which is being prepared over night.

Mr. Miller never explained why they proposed this change. If they were proposing to substitute Trunkline for the expansion of Panhandle, don't you think the parties and the Commission and the public are entitled to some explanation other than the unsupported conclusion and unexplained conclusion that "It has been decided since the application was filed that this change should be made"?

That is why the rules require that amendment be filed and people have an opportunity to answer them. Under

this procedure these certificate proceedings would be a joke. The application would be nothing, because you just file it and then you come in and say "Well, we have changed the whole situation. You spent a lot of time studying it, but that doesn't mean

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anything. We decided last week-end we are going to revise the whole thing. We won't file a new application. We won't go to the bother of explaining why we are making the change."

That is what we have here. I submit that the Commission should dismiss this application filed by Panhandle in Docket G-2433 on the grounds that Panhandle has abandoned the application as filed for failure of prosecution, and that the Commission at the same time direct Panhandle to file a new application covering the 100 million feet of capacity for which they got temporary authority without having a hearing.

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William R. King

was called as a witness, and having been first duly sworn, was examined and testified as follows:

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Direct Examination

By Mr. Miller:

Q. Mr. King, would you please give us your full name residence and position with Panhandle Eastern Pipe Line Company? A. My name is William R. King. I reside at 602 South Lincoln Avenue, Liberal, Kansas. I am employed in the Geological Department of the Panhandle

Eastern Pipe Line Company as storage geologist, with officers in Liberal, Kansas.

Q. Mr. King, will you give us a brief resume of your educational background and experience since the completion of your formal education? A. Yes, sir. I received a Bachelor of Seience degree in 1949 and a Master of Science degree in 1950 from the University of Kentucky with a major in geology.

I am a member of Sigma Psi and Sigma Gamma Epsilon honoraries. During my senior year at the University of Kentucky, I worked part-time for the U. S. Geological Survey.

While enrolled in the graduate school, I was employed as a graduate assistant by the Department of Geology and as part-time geologist by the Kentucky Geological Survey.

In July, 1950, I was employed by the Federal Power

Commission as a geologist. I worked in the Division of Rates until August 1951. In August, 1951, I was employed by the Ashland Oil and Refining Company as subsurface geologist in the Illinois Basin Division. My assignment was in well-site geology, surface geology, and sub-surface mapping.

I remained with Ashland until September of 1952. Since September, 1952 I have been continuously employed by the Panhandle Eastern Pipe line Company. I am a member of the Geological Society of America, the American Association of Petroleum Geologists, and several local geological societies.

Q. Mr. King, just what did you have to do with this Waverly Storage project on behalf of Panhandle? A. I am presenting the geology of the Waverly Storage Project. I did the project geology for Panhandle during the

course of operations. I was present at the well site during the drilling of all of the St. Peter wells and all of the structure wells.

I have prepared the sample studies, the core descriptions, the sub-surface maps, the geological tops, and so forth.

Q. Mr. King, do you have before you copies of documents which have been identified as Exhibits Number 1, 2, 3, 4 and 5? A. Yes, I do.

Q. Were those documents prepared by you or under your supervision and direction?

A. They were.

Q. Are they true, accurate and correct according to the best of your knowledge, information and belief? A. They are.

Q. In addition to the maps and tables which have been identified as Exhibits 1 through 4, is there a detailed description of the geology of this project contained in Exhibit Number 5? A. There is, yes, sir.

Q. Does that Exhibit Number 5, together with the Exhibits and map, correctly set forth the geological aspects of the Waverly Storage project? A. It does, yes, sir.

Q. Based upon your knowledge and experience, and the exhibits referred to, what conclusions, if any, have you reached on the geological aspects of the Waverly Storage Project of the Panhandle Eastern Pipe Line Company?

Mr. Shannon: I object, Mr. Examiner. No foundation has been laid.

Presiding Examiner: In what respect is there an absence of foundation?

Mr. Shannon: I am sorry, sir, I didn't hear.

Presiding Examiner: Would you read that, Mr. Reporter.

(Read.)

Mr. Shannon: There has been no showing that the witness

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has any experience in the operation of any storage fields. As I listened to his testimony, he had approximately one year's experience with Ashland Oil and Refining Company as a sub-surface geologist. And since September 1952 has been employed by Panhandle. So far as I am aware—and if I am wrong, I would certainly like to be correct—this is the only proposed storage program of Panhandle. This is not a storage operation; it is purely an experiment. The witness has had no experience to qualify him to express any opinions or conclusions with respect to the feasibility of this or any other structure for storage.

Presiding Examiner: Overruled. The objection on the points made will go to the weight of the witness' testimony.

The Witness: My conclusions are that the Waverly Dome is an excellent structure for gas storage. It has enough closure to allow for future expansion. It has a reservoir, the St. Peter sandstone, of unusually high porosity and permeability and it has an impermeable and impervious barrier.

It is located close to the pipe line in an area where storage is required. The Waverly Dome ideally fulfills the geological requirements of a gas storage project for the Panhandle Eastern Pipe Line Company.

Mr. Shannon: Mr. Examiner, I move to strike the answer on the further ground that he has expressed conclusions with no explanation in the record. He says that this has an unusually

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high porosity and permeability, and it has an impermeable and impervious barrier, it has a barrier, and so forth, none of which has been explained. We have been handed a series of exhibits here that we have not had a chance to look at. The witness gets on the stand and expresses conclusions. It is a complete denial of an opportunity for cross-examination or a fair hearing.

We should not have this record cluttered up with these unsupported conclusions. Where did he get the permeability, or porosity? He has got to show that he has had some basis for this, not just get on there and say "It has got unusually high porosity and permeability." That is an argumentative statement. I submit we are wasting time.

Presiding Examiner: The witness is stating his opinion and conclusions. The motion is denied.

Mr. Flax: Mr. Examiner, I will move that there be stricken another portion of this testimony; that is "Where storage is required."

I do not think that has come within this witness' scope of testimony, whether storage is required in this area.

Mr. Miller: Mr. Examiner, we would have no objection to striking that portion of his testimony. That will be covered by other witnesses.

Presiding Examiner: Let's make it clear what portion is being stricken.

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Mr. Miller: Where he says "It is located close to the pipe line in an area where storage is required."

We have no objection to striking "in an area where storage is required" and have his testimony read "is located close to the pipe line."

Presiding Examiner: Very well. The phrase referred to is stricken.

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91

W. H. Tompkins

was called as a witness, and having been first duly sworn, was examined and testified as follows:

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Direct Examination

By Mr. Miller:

Q. Mr. Tompkins, will you give us your name, address and position with Panhandle Eastern Pipe Line Company? A. My name is W. H. Tompkins. I am a storage engineer for Panhandle Eastern Pipe Line Company. And my home address is 529 Ward Park Way, Kansas City 12, Missouri.

Q. Mr. Tompkins, were the exhibits which have been identified as Exhibits Number 6 and 7—first, do you have copies of those exhibits before you? A. I certainly do, yes, sir.

Q. Were they prepared by you or under your supervision and direction? A. They were.

Q. Are they true, accurate and correct according to the best of your knowledge, information and belief? A. They are.

Q. Will you give us a very, very brief description of what each exhibit purports to show, taking first Exhibit Number 6? A. Exhibit Number 6 is entitled "Northwest-Southeast Cross-Section of Waverly Dome" in which it is attempted to

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show the shape as we accept it, and along this line drawn from Northwest-Southeast, and something of the compari-

son of vertical elevations as against horizontal distance.

The main purpose of the cross-section is to explain the use of a partially penetrated well into a sand reservoir; after we fill it, of course, it will be full of gas. But the gas will be underlain by water.

But during the production from the partially penetrated wells, we are trying to limit the amount of water coning that might come into the wells and cut down the productivity of the wells. I think that is the essential purpose of having this Northwest-Southeast cross-section in as an exhibit.

Q. Now, will you give us a similar explanation of the purpose of Exhibit Number 7? A. Exhibit Number 7 is entitled "Gas in and Out of Waverly Storage", and is meant to show first the gas that would be available for injecting into storage; secondly, possibly the total storage that might be in the reservoir at any one time; and in parentheses are figures that represent the part of the total storage that we would consider to be cushion gas.

Q. That is shown on a cumulative basis? A. On a cumulative basis, yes. Down at the bottom of the page, you add your net ins and outs, and you end up with an annual total that shows the amount of gas that was handled into storage, out of storage. The net difference between the amount

of gas handled in and out of storage is necessary for laying out the plant that is to handle your gas into the reservoir.

Q. Now, Mr. Tompkins, will you give us a brief resume of your educational background and experience since the completion of your formal education? A. I am a graduate of the Oklahoma A and M College, Stillwater, Oklahoma, in the class of 1927, with the degree of Bachelor of Science in Civil Engineering. I was immediately employed by

companies associated with the Cities Service group as an engineer in the construction department during the building of pipe lines, refineries, pumping stations, and all associated construction.

During 1930 and 1931, I was employed during construction of the pipe line built from the Panhandle Field of Texas to Chicago, Illinois, that is now operated by the Natural Gas Pipe Line Company of America. At the completion of the Chicago Line, I was employed as a meter station attendant at Joliet, Illinois and worked in all phases of metering regulation and control of gas into Chicago.

In 1936, I was transferred to Fritch, Texas, as production engineer and had complete supervision over engineering tests of producing gas wells. During this time I helped introduce and perfect the U. S. Bureau of Mines' back pressure method of testing gas wells in the Panhandle Field of Texas.

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In 1942, I was employed by the U. S. Engineers during the construction of war facilities by the District Engineer at Dennison, Texas.

My affiliation with Panhandle Eastern Pipe Line Company began in 1944. As Production Engineer I have had vomplete supervision of all engineering tests of wells in all fields and furnishing the entire market of Panhandle Eastern Pipe Line's pipeline.

In 1946 I was made Engineering Assistant in the Production and Gathering Department and supervised the location and design of gathering-system pipelines, field compressor stations, and all phases of drilling for, producing, and gathering natural gas.

As Storage Engineer, I made the initial engineering studies of Winterfield and Cranberry Lake fields in Michi-

gan, that are now operated by Michigan Gas Storage Company.

I am a member of the American Institute of Mining and Metallurgical Engineers. I am a member of three subcommittees of the Committee for the Underground Storage of Natural Gas for the American Gas Association. These subcommittees are: 1. Deliverability, 2. Storage in water sands, 3. Storage Inventory Verification.

Q. Mr. Tompkins, just what is the scope of your testimony in connection with the Exhibits that have already been identified? What is your testimony in this proceeding?

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A. My testimony in this case covers the engineering aspects concerning the feasibility for the underground storage of natural gas at the Waverly Dome structure in Illinois. The subjects that will be covered by me are: size of structure, total storage capacity, cushion gas required, numbers of wells, and deliverability.

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Q. Now Mr. Tompkins, will you elaborate on the sites of the reservoir involved at the Waverly Dome?

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A. Waverly Dome is a closed anticline covering some 7,000 acres with closure in excess of 90 feet. The size, shape, and closure of the dome was plotted on Keokuk-Burlington chart, using information from the 22 previously drilled wells and 17 structure tests.

The structure as mapped on the Keokuk-Burlington tops varies from 54 feet above to 110 feet below sea level. The spill point of the structure is in a slope reversal occurring at about 50 feet below sea level. The following table indicates the acre feet of reservoir space per contour

interval and the accumulative acre feet of reservoir space above the —40 contour.

The table appearing immediately below what I have just read does have several columns in it, of which the first is the enumeration of the various contours beginning with a plus-56 at the top, and a minus-40 at the bottom. The second column is meant to represent the area closure by each of these contours as you look straight down on them. The third column—

Mr. McGrath: Mr. Examiner, he said a plus-46 at the top of the first column going down to a minus-30. I see a plus-53; and as far as the record is concerned, we are going to have to dream what is in between.

Mr. Miller: It will all be in by the time he gets through. There is some interpolation.

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Mr. McGrath: I wonder if the witness might tell me whether he is correct in stating a plus-56 at the top when it should perhaps have been plus-53?

Presiding Examiner: There is a plus-56 in the second figure.

Mr. McGrath: I see that. Yes, sir. But he said he started at the top with a plus-53. If he is going to put this in, I would like to know what he is talking about at the time.

Mr. Shannon: Mr. Examiner, I would like to renew my objection. I request, your Honor, to direct Panhandle to put these tabulations in Exhibit form so we do not simply have a garbled record here of a lot of meaningless figures. These tabulations are normally put in the form of an exhibit. It is just a matter of mechanics. Then we won't have any questions with respect to copying wrong figures and having them mixed up.

I urge that most sincerely. I do not want to interfere here, but to save time, this is an important case. This is

an extremely important part of it, this Waverly Storage Field, important to my client and important to every customer on this line.

This data should be put in in the usual manner, I submit, not simply take time here to be correcting these figures in the record, and when we get all done not knowing where we are.

Mr. Miller: Mr. Examiner, this was put in in this form

largely for the convenience of the parties because we felt that it would be more understandable if the figures were before the parties with the testimony, and in the transcript with the testimony, rather than have some reference to some exhibit number which would be perfectly meaningless.

We put in seven exhibits. It seemed to us this particular material was more susceptible of presentation in this manner and more understandable in this manner. That is the reason we presented it this way.

Presiding Examiner: I know of no rule which says that figures cannot constitute part of a witness' testimony. The objection is overruled. I think we had better have a new question at this point, Mr. Miller.

By Mr. Miller:

Q. Mr. Tompkins, you referred to a table indicating the acre feet of reservoir space, the contour interval and accumulated acre feet of reservoir space under the 40-foot contour.

Will you give us the figures you had reference to? A. If you wish me to go back and explain—

Q. Start with the column and either read down the page or across the page.

Mr. Miller: By agreement, everybody has this before them. The reporter has a copy of it that he may copy

it in if they don't want to hear these figures read. I will be glad to do whatever the Examiner directs in that respect.

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Presiding Examiner: As a matter of convenience, it would appear to me to be proper for these figures to be copied into the record by the reporter without being read. I think it would make for a clearer, more exact and accurate record.

Mr. Flax: We have no objection to the copying of this chart into the record, Mr. Examiner.

Presiding Examiner: Mr. Reporter, will you copy into the record the figures in the table on page 3 of the prepared testimony.

	Contour From	To	Acres	Thickness Feet	Effective Acres	Increm. Acre Ft.	Accum. Acre Ft.
SE TOP							
	53	50	31	1.5	31	46	46
NW TOP							
	56	50	39	3.0	39	117	163
SADDLE							
	50	40	648	10.0	359	3,590	3,753
	40	30	1,183	10.0	916	9,160	12,913
	30	20	1,964	10.0	1,574	15,740	28,653
	20	10	2,649	10.0	2,307	23,070	51,723
	10	0	3,466	10.0	3,048	30,480	82,203
	0	—10	4,292	10.0	3,869	38,690	120,893
	—10	—20	5,311	10.0	4,802	48,020	168,913
	—20	—30	6,640	10.0	5,976	59,760	228,673
	—30	—40	7,865	10.0	7,253	72,530	301,203

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By Mr. Miller:

Q. Mr. Tompkins, do you have any further comment to make in connection with the table which has just been copied into the record? A. I think the table is more or less self-explanatory and the full purpose of the table is to give the acre foot volume as we understand the size of the Waverly structure.

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Q. Now, Mr. Tompkins, will you elaborate on the porosities and permeabilities of the reservoir involved in this Waverly

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Storage Field?

A. For the purposes of this report, there was one St. Peter sand test well known as the Doolin 1-16, which had been drilled near the highest known elevation of the Dome. Continuous cores were cut while penetrating the reservoir sand body. Criteria obtained from an analysis of each foot of core are quoted in the table below.

Mr. Miller: Here again, Mr. Examiner, I assume we may have the same understanding that these figures may be copied into the record rather than have the witness—

Presiding Examiner: It is not an understanding; it is a ruling.

Mr. Reporter, will you copy into the record the table of figures at the top of page 4 of the prepared testimony.

Core No.	Depth From	Depth To	Percent Porosity	Permeability Horizontal	Permeability Vertical	Drilling Time	Feet Cut	Feet Recovered
8	1822	1843	13	686	(686)	10.7	21	13
9	1843	1864	17	598	678	12.4	21	14
10	1864	1887	19	954	940	7.3	23	17
11	1887	1910	18	666	684	12.7	23	17
12	1910	1933	17	921	837	6.6	23	14
13	1933	1956	17	596	662	7.8	23	19
14	1956	1979	14	372	342	20.6	23	21
15	1979	2002	9	65	—*	28.0	23	23
16	2002	2025	11	134	—*	33.8	23	23
17	2025	2048	11	45	—*	30.0	23	29
Totals	226						226	180
Average			16	498	680	17.0		

Note: ()—Estimated
Note: *—Vertical millidarcies were not determined.

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Mr. McGrath: Mr. Examiner, I wonder if we might have that table outlined somewhat so that we will know just what they are going to copy in.

Mr. Miller: Starting from the word "Core" in the upper corner and ending with the word "Determined" in the middle of the page.

By Mr. Miller:

Q. What further comment, if any, do you have on the closure of the Dome structure? A. The closure of the Dome structure limits use of the reservoir sand body to the top one hundred feet.

Average criteria of the first four cores, representing 88 feet of the usable 100 feet of reservoir sand body is given below:

Q. I think you might as well read those figures in.

Presiding Examiner: Why can't they be copied? I think it will make for clarity.

Mr. Reporter, will you copy into the record the three lines of words and figures at page 4 of the prepared testimony beginning

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with the word "Percent Porosity" and ending with the figure "61."

Percent Porosity	Permeability Horizontal	Permeability Vertical	Drilling Time	Feet Cut	Feet Recovered
16.75	726	747	10.8	88	61

By Mr. Miller:

Q. Mr. Tompkins, will you continue your testimony as to what drill stem tests or the like that were taken? A. A drill stem test was taken on the reservoir sand body as soon as total depth of 2070 feet had been reached. Wall packer was set at 1755 feet. Tool was opened for one hour and closed in for 30 minutes. Initial blow was hard and started decreasing in twenty-minutes, was completely dead at the end of the test.

Recovered: 180 feet of drilling mud and 1290 feet of brackish water. Initial flow pressure was 419 psig. Final flow pressure was 696 psig. Shut-in pressure was 700 psig. Hydrostatic head at 2070 feet was 860 psig. The shut-in pressure and hydrostatic head of pressures were measured at known depths and can therefore be plotted on a straight line graph of depth versus pressure.

Such a graph indicates a pressure at the top of the sand of 732 psig and at the depth of closure the pressure woud be over 780 psig. The average pressure of gas in the reservoir at

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capacity would be about 757 psig.

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Q. Now, Mr. Tompkins, will you proceed to explain how you went about determining a calculation of gas in place? A. The criteria of pressure, effective porosity and reservoir volume allows a calculation of gas in place by contour intervals and cumulatively to total capacity. This is shown in the following table:

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	Contour From	To	Accum. Acre Ft.	Increm. Gas in Place	Gas in Place M²CF at 14.4 PB
SE TOP					
	53	50	46	17.42	17.42
NW TOP					
	56	50	163	44.32	61.74
SADDLE					
	50	40	3,753	1,359.79	1,421.53
	40	30	12,913	3,559.54	4,981.07
	30	20	28,653	5,871.85	10,852.92
	20	10	51,723	8,738.24	19,591.16
	10	0	82,203	11,544.93	31,136.09
	0	—10	120,893	14,654.64	45,790.73
	—10	—20	168,913	18,188.57	63,979.30
	—20	—30	228,673	22,635.24	86,614.64
	—30	—40	301,203	27,472.24	114,086.88

When reservoir is full:
One acre foot contains 378.77 MCF of 14.4 PB gas
Porosity 17 percent
Temperature 60°F.

Mr. Flax: May I ask a clarifying question?

Mr. Miller: Yes.

Mr. Flax: Mr. Tompkins, does this table in tabular form set forth the St. Peter sand that would correspond to Exhibit 4

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as a pictorial form of the Keokuk-Burlington sand? In other words, could this table which we have just had put into the record be also utilized to draw a map of a similar nature, exhibit 4?

The Witness: The volumes quoted in this table that are now under discussion are volumes that we consider—in other words, if you look at the bottom figure, the last column, that is the total storage capacity of the reservoir as St. Peter sand, because we used the density of the gas at the depth of the St. Peter sand to fill the pore space that would be in the sand reservoir.

(111)

Mr. Flax: In the St. Peter sand reservoir or the Keokuk-Burlington sand reservoir?

The Witness: It is the St. Peter sand reservoir, the volumes that we expect to accrue if total storage capacity were ever reached in the St. Peter sand reservoir, the reason for that being, I realize, that volumes were taken from a shape that was plotted on Keokuk-Burlington.

We assume that the St. Peter sand is going to be conformable and will take the same shape as the Keokuk-Burlington map. That allows us to calculate a volume. We turn that volume into pore space that can be occupied by gas at the density of the depth of the St. Peter sand below the ground surface.

Mr. Flax: Are you using the same area of closure as the

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Keokuk-Burlington?

The Witness: Yes, sir.

By Mr. Miller:

Q. Now, Mr. Tompkins, do you expect the St. Peter sand reservoir at Waverly to operate as an aquifer? And, if so, will you explain what you mean by that? A. I do expect the St. Peter sand at this location to operate as an aquifer. As it was originally drilled, it contained no oil or gas, and that is specifically before we injected gas into the storage reservoir, but was only full of water.

Presiding Examiner: Mr. Tompkins, will you tell me what you mean by aquifer?

The Witness: An aquifer is merely a porous rock below the surface of the ground which is normally full of water, which is under a hydrostatic head of pressure.

By Mr. Miller:

Q. Will you proceed, Mr. Tompkins, with the rest of your explanation of this reservoir as an aquifer? A. The

sand is permeable enough that upon injection of natural gas, the water moves back more or less readily to make room for the gas.

Withdrawal of the gas is followed by an influx of water and results in the reservoir performing as a partial water-drive reservoir. High rates of withdrawal may remove gas faster

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than the water can be replaced, with the result that at any one instance, the reservoir could be performing partially as a water-drive reservoir and partially as a volumetric reservoir. It is expected that the sand reservoir at Waverly Dome will perform more nearly as a water-drive reservoir.

Q. What comments, if any, do you have by way of elaboration on the deliverability and cushion gas and working storage at this proposed reservoir? A. Two facts of import to operation of an aquifer as a storage reservoir become apparent. These are:

1. Maximum deliverability is dependent upon numbers of wells and the feet of penetration into the sand body.

2. Volume of cushion gas is set by having to maintain a fixed distance between bottom of well bores and the gas-water contact so as to limit coning of water into the wells during high deliverability rates.

Wells planned for Waverly Dome will have partial penetration. This allows spherical flow for gas leaving the reservoir and approaching the well bores for production. Water coning is less severe where a greater space is left between bottoms of well bores and the bottom of gas bubble.

As more fully shown on Exhibit Number 6, minimum elevation for gas-water contact to limit cushion gas volume

(113)

is plus-18 feet. Cushion gas volume is then calculated to be approximately 12,600,000 MCF.

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All wells will be bottomed, under present planning, at plus-33 feet. Total penetration of 20 wells will be 202 feet. Individual well penetrations vary from 6 feet to 19 feet. Open flow per 24 hours per foot of penetration has been determined at 5,670 MCF. Each foot of penetration, producing at 17.5 percent of open flow during peak demand, would produce 1,000 MCF per 24 hours. Total penetration of 202 feet would therefore produce 202,000 MCF per 24 hours during peak demand.

Working storage of 4,000,000 MCF would be injected over a season of 180 days and, in a normal year, injection rates would average 22,200 MCF per day. Actual injection rates would probably vary between none and as high as 100,000 MCF per day. Injection rates will be determined by the net difference between pipeline capacity and sales requirements. The high injection rate is estimated to require a total of 4,290 installed horsepower.

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Q. Now, Mr. Tompkins, what period of time do you expect to elapse before total storage can be made to approach the sum of total cushion and working storage volumes? A. It has been estimated that a period of at least two winter seasons will elapse before total storage can be made to approach the sum of total cushion and working storage volumes, or approximately 16 million MCF. Such a time estimate is again based upon estimated net differences between pipe line capacities and sales requirements.

The following tabulation—and I might as well insert here Exhibit No. 7—

Q. That exhibit has already been identified. So what you have reference there to when you say the following tabulation, is that you mean Exhibit No. 7? A. Exhibit No. 7.

Q. All right, proceed. A. —shows the estimated volumes in billions of cubic feet of 14.4 pressure base gas as net into and out of storage for the five years, 1954 through 1958. Volumes in and out of storage are by months. Daily variation in injection and production volumes remain to be set after further study.

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By Mr. Flax:

Q. How was it determined that you would operate this storage field at only a 4 billion cubic foot working storage? A. I was asked to find a project that would handle 4 billion cubic feet of gas into this reservoir and out in any one cycling period.

Q. Were you given any directions as to the deliverability that would be necessary, or were you just given a 4 billion cubic feet working storage figure to plan? A. I was asked to provide for a peak day of 200 million cubic feet, producing a total working storage of 4 billion cubic feet.

Q. Who told you to prepare that? A. Panhandle Eastern.

Q. What individual? A. It came from Mr. Hager.

Q. It is possible that you could get a considerably greater working storage in this formation according to your estimates. Is that right? A. If your want to increase the depth by pumping more gas into it, I would say you could definitely get much greater storage capacity out of this particular reservoir.

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Q. Did you have any hand in the determination of the economics of what volume of working storage and what deliverability that would be required? A. No, sir, I did not have any in setting working storage or deliverability as a maximum peak day.

Q. You were just given those two figures by Mr. Hager? A. Yes, sir.

Q. Did you prepare a report on this Waverly Dome which you gave to Mr. Hager before he gave you the figures on the deliverability and the volume of working storage? A. I did not prepare a report before I was given the working storage of 4 billion feet and the peak-day deliveries—

Presiding Examiner: I am having trouble hearing you. Please speak up.

The Witness: My answer was that I did not prepare a report for Mr. Hager before I was given the figures of 4 billion cubic feet for working storage and a maximum day deliverability of 200 million cubic feet.

By Mr. Flax:

Q. In answer to several questions as to injection rates and to development, you mentioned that the injection rates and the development of this field will depend on the net difference between pipe line capacity and sales requirements. In answer to a question by Mr. Shannon, I believe you indicated that that had been given you by Mr. Morton. Is that

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correct? A. That's correct.

Q. Did Mr. Morton just give you the net difference between pipe line capacity and sales requirements, or did he give you what pipe line capacity he would have and what sales requirements he would have at any particular

time? A. He gave me the net difference between the pipe line capacity and the sales requirements only.

Q. Did he give you that as monthly figures? A. He did.

Q. Did he also give you a schedule of withdrawals in any month or in any day? A. No, sir, he did not. The thing this project has to perform is the peak day, possibly one. This project only has to furnish the one peak day of 200 million, and if it can make that one day of 200 million, it can make any lesser day.

You can readily see that if you divide your 4 billion of working storage by the number of days in the storage production cycle, the average day is going to be very much less than 200 million. The thing I am trying to point out is that if we do produce one day at 200 million, there will have to be several days at much less than 200 million in order to produce only 4 billion of working storage in the production cycle.

Mr. Shannon: May I ask him a question there, Mr. Flax?

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Mr. Flax: Yes.

Mr. Shannon: Have you made a determination of what volume you have to have in storage in order to deliver 200 million in one day?

The Witness: My estimation of the volume in storage to produce 200 million in any one day is the 12 billion cubic feet of cushion gas. I would be able to produce that 200 million cubic feet at the time we reached the 12 billion cubic feet, any time between 16 billion and 12 billion I should be able to produce 200 million peak day.

Mr. Shannon: In other words, at the end of the winter season, if you had 12 billion feet of gas in the field, you could take out 200 million if needed to meet a late peak day?

The Witness: That is right.

By Mr. Flax:

Q. With that 12 billion in storage, could you take out more than 200 million? A. I might for a very short time, but I wouldn't depend on it for a 24-hour period. I might take it out at a rate of more than 200 million for a short period of a day, but not for a total day.

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Q. In this matter of a partial water drive, I believe you mentioned in your direct testimony something to the effect you may not get in a well in a formation of this nature the full effect of water drive, because your gas may precede your water to the extent the water isn't pushing the gas out, but the gas by some of its own pressure is coming out of the well. Is that correct? A. I made the statement that in any one instance the reservoir might perform as a partial water drive reservoir and a partial volumetric reservoir due to the rapid withdrawl of gas from the sand.

Q. You put it very much better than I, Mr. Tompkins. In such circumstances, your pressures of your gas coming out of the well might differ from those indicated by your drill stem test of the salt water in the well at the present time. Is that correct?

A. I would say that they would differ at all times from the drill stem test pressures that I put for the well;

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because those are shut-in pressures for the formation and you were talking about working pressures to get the gas out of the sand. I believe that is what you have in mind?

Q. You do from those drill stem tests convert them to a working pressure, an estimate of working pressure

within your well. Is that correct? A. That is right. They can be used for that.

Q. Isn't that what you have done in your estimates and in your open flow estimates, used those pressures? A. That's right.

Q. Because of this effect which you described a little earlier, that the gas may precede the water, then your working pressures which have been developed from your drill stem tests might not obtain in the actual operation of the well, is that correct? A. Might not obtain to the exact figure that is set in that testimony, yes. Those are meant to be average conditions and not as to what you would find in any one instance during the operation of a well or the operation of the project.

Q. Do you have any limits or tolerances, any percentage figure that you would consider as being a satisfactory result that your actual experience would produce that you would consider a satisfactory result as compared to your estimates of the volume that you will be able to get out of this formation

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in any one day?

In other words, what percent of engineering tolerance are you allowed in these estimates? A. I would say anything within ten or 15 percent would be close tolerance.

Q. After you have preceded through one cycle of injection and removal of gas from this well, you should be able to have a better picture of the operations of it, will you not? A. That is very true. One cycle will give us considerable information and several cycles will give us much more information.

Q. Mr. Tompkins, on your Exhibit No. 7 in which you show the gas in and out of the Waverly storage, I note that your storage cycle is such that during your summer

months there are certain injections, in the winter months, there are withdrawals. Are those injections or withdrawals net figures during those months? A. I would say that they are net because to get down to your total of gas in place in any one year, you take the difference between the plusses and the minuses.

Q. Take December in each of these years. You have a minus-one figure. A. That is right.

Q. In your minus-one figure does that mean that some

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days you will put gas in and some days you will take gas out, and then you will wind up with a minus-one balance during that month? A. That is right.

Q. In October and November, do you estimate that gas will go in on some days that are warm and come out on some days that are cold, and you will have a net volume, a net change of zero in your storage? A. That could absolutely happen.

Q. I know it could happen, but is that your intent, the way this will operate? A. If we had the cold day and it was necessary to produce gas after injection so that our net ended up in any one month as zero, that is what we would do.

Q. Your answer is from the standpoint, that is what you physically could do. Do you know if that is the way Panhandle intends to operate these storage fields? A. That is the way we intend to operate the storage fields.

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By Mr. May:

Q. Mr. Tompkins, as I understand this open flow calculation you have made, it is an average that you have used? A. Yes, sir.

Q. And it is solely a calculation? A. That is correct.

Q. And it is based primarily upon your determination of permeabilities through core analysis of one well. A. That is right.

Q. Only one well, a core analysis. Is that correct? A. Yes.

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Douglas Ball

was called as a witness, having been first duly sworn, was examined and testified as follows:

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Direct Examination

By Mr. Miller:

Q. Please state your name, address, and business, Mr. Ball? A. My name is Douglas Ball. I am an oil and gas consultant of the firm of Ball Associates. My business address is 1025 Vermont Avenue, Northwest, Washington, D. C.

Q. Will you give us a brief resume of your educational background and experience as an oil and gas consultant since completion of your formal education? A. In 1943, I graduated from the Colorado School of Mines with the degree of Petroleum Engineer. Before attending, and during, between semester periods at the School of Mines, I worked in refinery construction and oil field jobs in Canada, and on reflection seismic crews in North Texas, Northern Louisiana and the Gulf Coast, winding up as engineer and party chief.

During World War II I served with the 789th Engineer Petroleum Distribution Company of the Army of the

United States as commanding officer of the Parbatipur-Jogighopa section of the Army's Bengal-Assam pipeline. Other jobs in the Army included that of special assistant to the Operations Officer at Fort Lewis, Washington.

From August 1946 to July 1949, I was employed by Phillips Petroleum Company as gas engineer in the Panhandle and Hugoton

Fields of Texas, Oklahoma, and Kansas. In this position I gathered and supervised the gathering of field data. I took part in and supervised the analyses of reservoir flow and pressure studies, using back pressure, deliverability, and open-flow tests and bottom-hole measurements; the synthesis of reserve estimates, predictions of well performance, and recommendation of well completion techniques and re-completion techniques such as acidization and tubing installations.

Since July 1949, I have been a member of the firm Ball Associates and the predecessor firm, Max W. Ball and Douglas Ball, in consulting practice.

Q. May I interrupt there. Who was Max W. Ball? Is that your father? A. Max W. Ball was my father, that is right.

Q. Go ahead, Mr. Ball. A. He founded the firm and only recently, in August, 1954, died.

Our practice has been primarily in the field of underground gas storage. Some of the clients for whom I have worked, are the Michigan Consolidated Gas Company, Michigan-Wisconsin Pipe Line Company, American Louisiana Pipe Line Company, the five major oil producers in Venezuela, Husky Oil Company, Israel-American Oil Company, the Government of Israel, the United States Corps of Engineers, the United States Department

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of Justice, the Natural Gas Storage Company of Illinois, the Central Illinois Light Company, Sid W. Richardson, Inc., Washington Gas Light Company, Laclede Gas Company, and Panhandle Eastern Pipe Line Company, and the Government of Turkey.

In 1951 and early 1953 I served on the technical subcommittee of the National Petroleum Council's Committee on Underground Oil Storage. During consulting practice, I made studies in Sweden and the United States of underground oil storage possibilities, and since 1952 on occasion I have acted as unofficial adviser to the interstate Oil Compact Commission on Underground Oil Storage.

I am the author of several papers and articles dealing with underground liquid storage published by the Petroleum Industry Press, and have talked on underground gas storage subjects on various occasions, one of which was the Practicing Law Institute's Symposium on current legal problems of the gas industry in June 1954.

I am co-author of "Oil Prospects of Israel" published by the American Association of Petroleum Geologists in 1953, and "Shoestring Gas Fields of Michigan," published by the American Association of Petroleum Geologists in 1941.

I am an active member of the American Association of Petroleum Geologists, the Geological Society of America, the American Institute of Mining and Metallurgical Engineers,

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and the Geological Society of Washington.

In 1953, I was the chairman of the Petroleum Branch Economics Committee of the American Institute of Mining and Metallurgical Engineers, and I have served and am serving on American Association of Petroleum Geologists' committees.

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Q. What prior experience, prior to this Panhandle Waverly project, have you had with underground gas storage? A. Our firm has worked as supervisory storage consultants on storage projects for several large cities. Among these are projects involving Herscher Field for the Natural Gas Storage Company of Illinois which markets gas in the Chicago area, the Lange Field of Laclede Gas Company for the St. Louis area, the Brandywine Field for the Washington Gas Light Company operating in the Washington, D. C. area, and most of the fields in Michigan operated by companies of the American Natural Gas Company group.

In all these fields, except those operated by the American Natural group, I have taken an active interest in exploration and development, and have largely supervised our firm's activities. I have also had occasion to study other storage fields. Ball Associates does more gas storage work than any other consulting firm of its nature.

Q. Mr. Ball, just what has been your connection and association with the Waverly Storage project of Panhandle Eastern Pipe Line Company?

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A. My first acquaintance with the Waverly Field was in 1950 when Max Ball and I made a study of the Devonian gas reservoir at Waverly and reported on the Devonian gas reserves and the delivery capacities of existing Devonian wells to the Central Illinois Light Company and to the Murwood Oil Company. In our report to these companies, we showed reserves in the Devonian of about one billion cubic feet and mentioned a possible deeper reservoir in underlying Silurian rocks.

In January 1954, Panhandle Eastern asked us to study data and reports on recent work Panhandle Eastern had done toward exploring the St. Peter sandstone at Waverly

for storage. At that time Panhandle Eastern had drilled its structural test wells and was able to draw a Keokuk-Burlington map showing Waverly to be a closed anticline, had completed the Doolin well on the topmost peak of the structure and had had a good look at the St. Peter reservoir and Trenton caprock in so doing.

Since that time we have been closely associated with Panhandle Eastern in Panhandle's Waverly work.

Q. Just what do you mean by being closely associated? Can you give us a little more detail of your association during the period last referred to? A. Since January 1954, when we were first asked by Panhandle Eastern to consult with them on their Waverly project,

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we have been in more or less continuous conferences and meetings with Panhandle Eastern, have participated in the decisions that led toward their further steps in exploring their storage project

Q. What experience, if any, Mr. Ball, have you had in nearby storage fields?

By that I mean storage fields nearby the Waverly project and involving similar sand. A. About sixty miles south and a little west of Waverly is the Lange storage field of Laclede Gas Company. In the Lange Field, as at Waverly, the St. Peter sandstone underlying Trenton shaly limes will hold the stored gas. The Ordovician rocks, including the Trenton limes and the St. Peter, are very similar in the two fields.

At Lange the St. Peter is about 1,500 feet deep; at Waverly it is about 1,800, and the pressure of the St. Peter water is correspondingly high at Waverly. A very careful and intensive geologic investigation has been completed at Lange which has showed its excellence for gas storage—

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Q. Will you proceed, Mr. Ball. A. The St. Peter at Waverly, according to the data from the cored wells, is a better sand than it is at Lange. The average horizontal permeability at Lange is about 540 millidarcies; at Waverly it is over 700. At Lange the average porosity on which Laclede is basing engineering calculations is eleven per cent; the corresponding figure for Waverly is seventeen.

The data from the wells cored through the caprock, the evidences furnished by the various logs of the continuity of the tight streaks in the caprock, and the pressure and chemical evidences that the caprock has kept separated for a major part of geologic time the fluids in the Trenton and St. Peter formations, support our conclusion and that of the Missouri Commission that the Lange Field—

Q. Will you simply strike your reference to the Missouri Commission in accordance with the Examiner's ruling. A. I beg your pardon.

—support our conclusion that the Lange Field will be a successful storage field. Approximately the same conditions exist at Waverly, and Waverly has held gas since the summer of 1954.

Q. Mr. Ball, what are the requisites for underground storage?

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A. Three chief things are required for a safe and successful storage field:

1. A reservoir bed, usually sandstone or limestone, porous enough and thick enough to hold much gas in a relatively small area, and permeable enough that fluids can move readily through it.

2. A caprock or sealing bed, such as a clay shale, overlying the reservoir, impermeable enough and continuous

enough that fluids cannot move through it to escape from the reservoir.

3. A trap, a structural condition of the rocks that confines a gas accumulation to a relatively small area. The traps easiest to find and most commonly known are closed anticlines, rocks folded to form domes.

Natural gas fields have all these requisites and in addition have a nature-given supply of gas in the reservoir.

Q. There has been some testimony in this case to the effect that this particular storage field will be a partial water-drive field. What comments, if any, do you make on the use of aquifers for gas storage? A. Where the natural fluid is water, the reservoir is known as an aquifer. Man stores in an aquifer by drilling into the reservoir at the top of a structure and displacing some of the water with the stored gas simply by pumping the gas in against the water's pressure.

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Many storages that are in use in old gas fields are partly aquifer storages because the storage companies store more gas in them than they originally held. The extra volume of storage gas over the volume of the original gas has displaced water, that is, pushed gas down the underslope of the caprock so that it occupies space that the water once filled when man first found the fields.

In addition to these, there are several fields that held little or no gas before injection for storage. Examples are Herscher, Doe Run, Muldraugh, Madison, and Redwater.

Q. Are you personally familiar with the Herscher Field that you referred to? A. Yes, sir.

Q. Go ahead. A. The Herscher Field is a development of The Natural Gas Storage Company of Illinois for the Chicago area gas market. As storage fields go it is large but young, being in its second injection-withdrawal cycle.

It is troubled by a mechanical leak of some sort, but withdrawals last winter have shown it to be an excellent stored-gas producer. The Storage Company has over seventeen billion cubic feet of gas in Herscher now.

Q. Now, Mr. Ball, how do the porosity and permeability affect the suitability of a reservoir for storage? A. The suitability of a reservoir bed depends on its

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porosity and permeability. The safety of a sealing bed depend on its continuity and impermeability.

Permeability is the property of a porous rock that permits fluid passage through it. The unit of measurement is the darcy; or more commonly, the millidarcy, one one-thousandth of a darcy. The permeability of a rock may not be the same in all directions. It often is greater horizontally, parallel to the bedding planes, than vertically, transverse to the bedding planes; less frequently the vertical permeability is greater than the horizontal.

Horizontal permeability plays the major part in the delivery capacity of a gas well, but vertical permeability is also important. Vertical as well as horizontal movement contributes to the withdrawal of gas through a well from the reservoir.

The permeabilities of cap and reservoir at Waverly were determined from core samples by standardized techniques in laboratories equipped for the purpose and are reasonably comparable to those at the Lange Field.

The porosity of a reservoir bed is the percentage of its total volume that is "pore space" or "voids" between the solid particles of the rock, the solid particles in a sandstone being the sand grains and cementing material.

The "effective porosity" is the percentage of total volume that is interconnected pore space or voids and that is

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not occupied by residual water clinging to the surfaces of the solid particles or lingering in the voids.

The weighted average effective St. Peter porosity of seventeen percent, which should increase with the use of the reservoir for storage, as testified to by Messrs. King and Tompkins, is entirely adequate for such storage taken with the storage sand thickness which is greater than the structure's closure.

Q. You were present and heard the testimony of those witnesses, did you, Mr. Ball? A. Yes, sir, I was.

Q. All right. Go ahead. A. The weighted average permeability for the St. Peter of over 700 milidarcies is entirely adequate to accept and deliver gas from storage; many good gas reservoirs have less.

Q. The characteristics of the Plattin caprock member of the Trenton over the St. Peter and Joachim beds have been described by Messrs. King and Tompkins. You heard that testimony, did you? A. I heard that testimony.

Careful work on the cores and logs of the Plattin show that it has continuous streaks of shaly material with permeabilities so low as to prevent gas escaping from the St. Peter and Joachim.

Further work shows that in the hundreds of millions of years

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that these rocks have been in place, the fluid in the St. Peter sandstone and the fluids in the porous parts of the Trenton above the caprock have not mingled and exist at different pressures today.

Careful watch of the observation wells completed in the Trenton porosity above the caprock since gas has been injected into the St. Peter substantiates our opinion that

the caprock is successfully and safely holding gas in the St. Peter and that the impermeable Plattin beds presently holding the gas at the top of the structure are continuous over the structure and will hold greater volumes of gas down to the spill point.

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By Mr. Miller:

Q. At the time we recessed, Mr. Ball, I believe we had reached the subject of delivery capacity of storage fields generally, and the Waverly project in particular. Will you proceed with your observations and comments on that subject? A. Yes, sir. A gas well's delivery capacity depends largely on the permeability and penetration into the pay sand and the pressures available to force gas through the reservoir to the well. The pressure at which gas is stored in an aquifer such as the St. Peter at Waverly is substantially the same as the water presure in the reservoir before gas is injected. At Waverly the St. Peter pressure is about 760 pounds per square inch.

Too low a storage pressure means too little driving power to produce gas and consequent low delivery capacity or consequent high cushion gas requirements. Too high a pressure for the existing temperature conditions means that gas production may be difficult due to the formation of gas hydrates.

The approximate 760 pounds per square inch storage pressure at Waverly and the permeability and thickness of the St. Peter reservoir show that Waverly storage wells on the average should be adequate to take and deliver gas at such rates that the twenty input-withdrawal wells Panhandle plans

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to use appear reasonable.

Q. Are there any other characteristics of this reservoir at Waverly that deserve comment or consideration? A. Yes, I think so. The shape and steepness of the structure, so that about 15 feet of freeboard between well bottoms and the bubble bottom will exist during withdrawal from a 16 billion cubic foot bubble, favor gas withdrawals without water trouble.

The wells should sustain a pressure differential of 50 pounds per square inch for at least one day. Such a pressure differential for the 20 wells should deliver 200 million cubic feet in the one day with the postulated 200 feet of total penetration.

Such a delivery rate can probably be maintained for periods much greater than the single day. Conservative figures, subject to further refinement, indicate that the delivery of four billion cubic feet of gas from storage during December, January and February, leaving a cushion of 12 billion cubic feet, should be readily accomplished.

Q. Based upon your knowledge and experience, and upon your contact with this particular project, what is your conclusion? A. A combination of rock types and rock structure necessary for gas storage exists at Waverly in Morgan County, Illinois. The rock structure is an anticline of adequate closure

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to hold gas in any sealed porous bed. The St. Peter sandstone is thick, porous and permeable enough to make a good storage reservoir. It is sealed above by the Plattin formation which is continuous over the structure and impermeable enough to effectively seal gas in the St. Peter.

It has held gas in the St. Peter for about 8 months at

pressures higher than normal for the area. Above the Plattin are other tight beds, each of which by itself would be an adequate seal.

With the St. Peter sandstone as the gas reservoir, Waverly should be an excellent and safe storage field. It is in a site most suitably located for use by Panhandle Eastern Pipe Line Company.

Q. Mr. Ball, I believe you have already testified that you heard the testimony of Mr. King and Mr. Tompkins in this proceeding? A. Yes, sir.

Q. I take it then that you heard the cross-examination by Mr. Shannon, and I believe by Mr. Flax, Staff counsel, with respect particularly to Mr. Tompkins, with respect to the techniques which were used in mapping and calculating the estimated storage capacity of the Waverly project. Did you hear that testimony? A. Yes, sir, I heard that testimony.

Q. Are you familiar with the techniques which were

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used? A. Yes, sir, I am.

Q. Were you consulted in connection with the use of those techniques? A. Yes, sir, on all the major items, not entirely on all the details, however.

Q. But the procedures? A. Yes, sir.

Q. Please state whether or not the techniques used were in your opinion reasonable and proper and in accord with the standard practice in this business of storage field development? A. The techniques of mapping and determining the structure, that is the shape of the reservoir sand and the cap rock, are standard techniques used through the storage industry, and also the oil and gas industry. The use of a shallow marker bed to depict structure and then using other data to extrapolate to data

on a lower formation used for storage or used to produce oil and gas, is a standard procedure.

The use of such procedure is probably accountable for a good half of our producing oil and gas fields in this world.

The engineering techniques of calculating from measured permeabilities and porosities on core samples, how the storage reservoir will operate, are also standard for the industry,

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recognized as being applicable to storage problems and capable of being weighted conservatively as they have been done in this case.

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Cross-Examination

By Mr. May:

Q. Mr. Ball, as we understand it, it would be the St. Peter reservoir that would be used for storage purposes. Is that your understanding? A. Yes, sir.

Q. We have noted that on one exhibit marked here, Exhibit No. 3, that shows wells drilled and a penetration of the Devonian reservoir with some show of gas. That is your understanding, isn't it? A. Yes, sir. The Devonian formations have gas in them?

Q. As a matter of fact, in your own testimony you referred to a billion cubic feet of reserves in the Devonian, did you not? A. Yes, sir, I did.

Q. Will you explain to us why the St. Peter reservoir

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was selected as a storage area rather than Devonian, which had a show of gas, and you say has reserves in it? A. Yes, sir, I think I can explain that. The Devonian reservoir

is probably a good storage reservoir for a total storage of something like the one or two billion feet that we estimate to be in it. The Devonian reservoir, however, is almost certainly not usable for any storage greater than about that amount.

Q. But the Devonian actually had a show of gas in it, didn't it? A. The Devonian had gas and does have gas in it.

Q. And is the same thing true of the Trenton? That also had a show of gas in it, didn't it? A. The Trenton is primarily a limestone section, that is, it is a carbonate section of limestones and dolomites, with varying amounts of shale up and down through the section. The porosity that has developed in the Trenton is right in the top of it underlying the next higher formation known as the Maquokeal shale. But this porosity that developed in the top of the Trenton is very meager, and I doubt if it would hold even the one billion cubic feet of gas that the Devonian reservoir holds.

However, there is some oil staining in this porosity in the top of the Trenton and a very small amount apparently of associated gas.

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Q. What are the limitations on the storage capacity, referring back to the Devonian? Why did you conclude that that wouldn't have in excess of the storage capacity that you have estimated? A. The structure in the Devonian, meaning by "structure" the shape of the rock, is about the same roughly as it is in the Keokuk-Burlington or the St. Peter, or other formations within a few hundred feet vertically up and down of the Devonian.

However, the porosity in the Devonian occurs in a very thin layer, not at all like the St. Peter where the porous rock is as thick as the closure of the structure. The thin-

ness of the layer means that gas can only occupy the space in that layer and down to the Devonian spill point, which would be vertically just about above the spill point on the St. Peter, or on the Keokuk-Burlington—that is, on a vertical line between those two.

The thinness of the porosity would not allow very much gas to be in that narrow streak of porosity, so that by the time you tried injecting more than the one or two billion feet that is probably in there, you would have spilled gas off the edge of the structure.

Q. Are there similar limitations on the Trenton? A. I would say so, yes.

Q. You would make the same explanation with respect

to the Trenton as to porosity and so forth that you have made with respect to the Devonian? A. Yes, sir.

Q. It is the same characteristic sand? A. The Trenton is again a limestone primarily, with some dolomite in it. The porosity that is in there is almost entirely the result of solution, perhaps of submarine erosion of one sort or another. The porosity is very thin, probably not more than one or two feet up to in places ten feet, and the porosity itself is not very good. It is not very well developed.

Q. This St. Peter reservoir is deeper than the two we have been discussing, the Devonian and the Trenton, is it not? A. Yes, it is, that is right.

Q. And in effect what you are advocating is that you go through these two reservoirs that had a show of gas, Devonian and Trenton, down to a deeper sand into the St. Peter to use as storage reservoir? A. That is right. I may say here that the shallowness of the Trenton porosity

and the Devonian porosity does not stand in their favor to be good gas storages.

Presiding Examiner: Read the answer, Mr. Reporter.

(Answer read)

By Mr. May:

Q. Have they ever been tried out for storage?

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A. Nature has had good storage in both those formations for some hundreds of millions of years. I think that tries them out.

Q. I mean, has anybody attempted to use those formations for storage purposes? A. To the best of my knowledge, nobody has tried to use those formations for storage purposes at Waverly.

Q. In your testimony you made the statement "The permeabilities of cap and reservoir at Waverly were determined from core samples by standardized techniques in laboratories equipped for the purpose."

Are those samples and the results of the core samples in your working papers? A. Mr. Tompkins can answer as to exactly what is in the working papers.

Mr. Miller: I believe it was testified yesterday by Mr. Tompkins that those papers were in his work papers and will be made available.

Mr. May: And will be made available?

Mr. Miller: That is correct.

By Mr. May:

Q. Your work also is based on this one well that penetrated the St. Peter. Is that right, Mr. Ball? Your conclusions? A. The figures and conclusions that I have given in

my direct testimony are based on knowledge obtained from all of the wells, not only from the single well on top, the Doolin well, that Mr. Tompkins testified most about.

Q. He calculated open flows, for example, on the basis of that one well, as I understand it; from the core samples. A. That is correct. The typical St. Peter anticlinal structure in the western edge of the Illinois basis where lie Waverly and Lange is a little more silty and a little more highly cemented near the top of the structures, and ordinarily a core from a well that is drilled right at the top of a structure will show a little less well developed porosity and permeability than will one on the flank.

The Doolin well on which Mr. Tompkins based his figure is drilled right on the top of the highest of the two peaks on this structure. The wells cored later through the St. Peter all had better permeabilities and porosities, and I have used my knowledge of the porosities and permeabilities as developed from all of those wells in my figures and conclusions rather than just the Doolin well.

Q. Aside from the Doolin well, this exhibit 3 shows four additional wells had reached the St. Peter. Were calculations of open flow based on those four wells in addition to the one Doolin well? A. Let me find that.

Mr. Miller: Are you referring to Exhibit 3? What are

you referring to, Mr. May?

Mr. May: The document I have marked Exhibit 3. The pages are not numbered. I am referring to the—

Mr. Miller: It is the third page of Exhibit 3, isn't it?

Mr. May: Yes.

By Mr. May:

Q. This is what I am referring to. Let me ask you first: Were those wells corded? A. I would kind of like to have the question read again.

Presiding Examiner: Read the question.

By Mr. May:

Q. On Exhibit 3, Mr. Ball, there is a list of four wells drilled by Panhandle Eastern Pipe Line Company which reached the St. Peter formation. Were those wells cored? A. Yes, sir. Let me correct that. The Shakopee formation, the terminating bed of the Doolin is underneath the St. Peter, so the Doolin also was cored, that was drilled through the St. Peter.

Q. I didn't mean to exclude the Doolin well. That has been referred to as one that penetrated the St. Peter, and upon which the open flow calculations were made, as I understand it. A. Yes, sir.

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Q. The question now is whether these additional four wells that reached the St. Peter were cored? A. They were.

Q. Core samples were taken? A. Yes, core samples were taken, surely.

Q. Were the results of those core samples available to you? A. Not all of the core from these other wells was brought in from the field. The wells were all cored and studied by Mr. King to give the geological description. I can not say for sure that every foot of every core had a porosity and permeability determination taken of it.

Q. Were or were not the core samples sent to the laboratories for examination? A. That is something I can not tell you. Mr. Tompkins can give you the detail on just what part of what core was analyzed by laboratory.

Q. Did you personally see any laboratory report on the core samples taken from these four wells? A. Yes, sir, I was attending and more or less supervising some of the laboratory work and analytical work in the laboratory on some of these core samples.

Q. Are they in your working papers, the laboratory reports on the core samples taken from these four wells?

Mr. Miller: They are in Mr. Tompkins' working papers.

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A. We have a single batch of working papers for the whole project. Mr. Tompkins is the man in charge of them.

By Mr. May:

Q. But you did examine those core samples? A. Yes, sir.

Q. Do those core samples show the porosities and permeabilities on the four wells we have been discusing, I mean the laboratory report? A. Yes, sir.

Q. As a result of the sampling? A. Yes, sir.

Q. They set forth the permeabilities and the porosities? A. Yes, sir.

Mr. May: Thank you, sir. That is all at this time, Mr. Examiner.

Presiding Examiner: Does any other counsel than Staff counsel have any cross examination of this witness at this point?

Mr. John A. Mc Grath: I have a few, Mr. Examiner.

Presiding Examiner: Mr. McGrath, I believe you stated yesterday you wanted to follow Staff counsel. Is that right?

Mr. John A. Mc Grath: These are clarifying questions.

Mr. Ball, you state in your direct examination that you personally participated in Herscher field, Lange field, and

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Brandywine field, in their development. Is that correct?

The Witness: I so stated.

Mr. John A. Mc Grath: And that the Herscher field was in its second cycle of injection and withdrawal. Is that correct?

The Witness: Yes, sir.

Mr. John A. Mc Grath: Could you tell us how far the development has proceeded on the other two fields that you participated in as far as injection and withdrawal?

The Witness: Neither of the other two fields has yet had any gas injected into it. Is that the answer you wanted?

Mr. John A. Mc Grath: That is all I wanted to know. Thank you.

Mr. Wirth: Your Honor, I have a couple of questions.

Presiding Examiner: All right, sir.

Mr. Wirth: Mr. Ball, in connection with this injection of the two billion cubic feet of gas into the St. Peter reservoir, can you give me the pressure differential required to make that injection and the rate of injection?

Mr. Miller: I believe Mr. Tompkins would have been the witness for that question.

Presiding Examiner: That would be for the witness to say, I believe, counsel. If he doesn't know, he can say so. If he feels Mr. Tompkins can give a better answer, he will be entitled to so state.

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The Witness: I can only give an approximate group of figures for those figures.

Mr. Wirth: In view of your overall association with the project, I would be perfectly willing to take your answer on the general part of it, yes.

The Witness: The shut-in pressure on the St. Peter reservoir as we say, is about 760 pounds per square inch.

Gas was first turned into these wells and raised in pressure to a figure of something less than a thousand pounds, but over 950. After the gas had started making its way into the wells and had started drying up the areas of the St. Peter sand near the wells, so that it developed the permeability available to it, the pressure stayed about 940 during the rest of the injection. The injection rates were for the most part 15 to 25 million cubic feet per day during the injection—15 to 25.

There is a little more perhaps I think I should say. At the cessation of the injection, the pressures in the reservoir started dropping, indicating that the gas was making its way towards some sort of equilibrium in the reservoir. The pressure is still dropping. It has not yet gone clear down to the hydrostatic pressure, which indicates that the gas is still expanding a little and pushing water back.

However, the drop at this time is a very small amount.

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Mr. Tompkins can tell you exactly how much. We can say we are approaching a stabilized shut-in pressure, and that pressure again is down in the 730 to 760 range.

Mr. Wirth: Did you use in any way the rate of injection and the pressure differential required for that injection to check calculated availability of gas from the wells?

The Witness: We have never made any figures that we have even kept on those. Both the wells that were used for injection, the Doolin and the Stenemeyer, were rotary completion without particular efforts made to condition the mud or after drilling to clean up the hole free from drilling mud, so we did not want to postulate back pressure curves or anything similar on those wells.

Therefore we have not made that kind of figure on that injection. These wells being largely test wells, we didn't want to have anything that that would force us to use

the characteristics of those wells for our planned production and withdrawal wells, which we intend to complete, paying particular attention to not muddying up the sand faces.

Mr. Wirth: You did refer in your last previous answer to the fact that you are getting some equalization or pressure in the reservoir, since the cessation of the injection of gas?

The Witness: Yes, sir.

Mr. Wirth: I gather that it is your statement from what you

have said that in your own mind you are completely able to justify that continued drop in pressure by equalization rather than by any possibility of leakage out of the reservoir. Is that correct?

The Witness: Yes, sir. Your idea on that is exactly what my idea is. The pressure is still above the normal hydrostatic for the field. Of course, should it go below that point, that is something else again. But it never has.

Mr. Wirth: Did you have any well complexions terminating in the Trenton that might give you any indication as to whether you are getting any effect on the Trenton from this gas injection?

The Witness: We have two wells that are completed in the Trenton, and these wells have been carefully watched all the time that the injection was taking place and have been watched since that time.

Mr. Wirth: No change has been observed in them?

The Witness: There have been changes. There appear to be minor shiftings in fluid content of the Trenton and things like that. We can still never get a build up in pressure higher than eighty or 100 pounds. I think one time we had a shut-in pressure of 105 pounds on one of

those Trenton wells. There is no reason at all to think there is anything other than the minor shifting that is due to the elasticity of the cap rock over the St. Peter, the normal effect.

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Mr. Wirth: Then do I understand by that that you are concluding that there has been some shift in the cap rock that has in turn affected the pressure in the Trenton?

The Witness: Oh, yes, that happens every time you materially change the pressure in a formation. You see, during injection we changed the St. Peter pressure at the top of the structure over 200 pounds. That results, of course, in a slight adjustment of the rock surrounding the thing. Rocks being elastic material such as structural steel and the concrete and stone in buildings.

Mr. Wirth: How far were those Trenton wells that you have been referring to from the Doolin?

The Witness: There is one of these Trenton wells on each of the two separate small closures, and they are within a quarter of a mile each.

Mr. Wirth: Could you identify them on either Exhibit 2 or Exhibit 4?

The Witness: Yes, sir. I may say one other thing. We have carefully analyzed samples from the gas in the Trenton and have seen no resemblance at all to pipeline gas from any of the samples.

The Stenemeyer 1-B is the one on the south closure.

Mr. Wirth: Could you locate that by sections?

The Witness: Yes, sir. It is in Section 15, Township 13, north and 8 west. Section 15—

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Mr. Wirth: That is Well No. 11?

The Witness: That is right, well No. 11.

Presiding Examiner: At what map are you looking?

The Witness: I am looking on Exhibit 2, the map that just shows well locations and nothing else. We have got one on the north high. That is the Doolin-Carr well. That would be No. 21. These numbers have been assigned these things since I looked at this map. That is in Section 16.

Those wells are completed in the Trenton purposely just to watch the Trenton porosity for any signs of pipeline gas and since injection started, those wells have been carefully watched.

Mr. Wirth: Do I gather from your testimony particularly that the specific cap rock that you are depending upon is the Plattin limestone in the Trenton formation?

The Witness: Yes, sir.

Mr. Wirth: Will you refer to Exhibit 1 and designate where that is in the Trenton formation?

The Witness: The third letter description up from the bottom begins with the word "Mohawkiam."

Mr. Wirth: I am asking, Mr. Ball, whereabouts in the Trenton is the Plattin limestone? Would you designate it on your columnar section there?

The Witness: Yes, sir. The lime section that is the Mohawkian, if you will look down towards the bottom of it,

you will see that it becomes shaley. The shaley members and the sort of the area of the Plattin, that is the Plattin there, that pick-up in shale and increase in amounts of shale, are the things that we are depending on to be the cap over the caps.

Mr. Wirth: In other words, at the very bottom of the print. Is that it?

The Witness: Yes, sir, that's right.

Mr. Wirth: The dolomite just below that, is that porous to some extent?

The Witness: Yes, there is porosity in that Joachim

dolomite. However, there are some very impermeable-apearing streaks in the Joachim, too. I am not sure but what it would not have been safe to keep the gas below those streaks. They appear to be continuous and they are very low in permeability.

However, casing is being set above the porous streaks and we are anticipating that of course they will take some gas because we are going to include them in the reservoir.

Mr. Wirth: Though no calculations have been made as to volumes in the dolomite?

The Witness: No, sir. It will be small, exactly how small we don't know.

Mr. Wirth: Is this presumed complete conformity at the top of the St. Peter below the dolomite? It might be both

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of them?

The Witness: That is right. It might be both of them.

Presiding Examiner: Does Staff counsel have any cross-examination at this stage?

Mr. Flax: Yes, sir.

By Mr. Flax:

Q. Mr. Ball, you mentioned the pumping of water in and out of the Lange that had taken place. Why was water pumped in and out of that formation in the examination of it as a storage field? A. Simply because the measurement of delivery capacity, sometimes called deliverability, is a function of the rock characteristics of permeability and feet of penetration. The pumping in and out of any fluid with a measurable viscosity and density can supply you with data on what pressure differentials must be exerted across a segment of the porous rock for a given rate of flow.

Another way of saying that is by testing the delivery capacity or capacity to flow water through the St. Peter

sandstone, we were able to get some idea and a fairly accurate idea of how that sandstone would react to producing and injecting gas.

Q. That hasn't been done in the Waverly dome? A. No, sir, that has not been done. As I have already suggested, the well completions at Waverly were done with

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rotary tools, and it did not seem advisable to ever run water testing on wells that had been completed with rotary tools with drilling mud not specifically designed for the highest permeabilities.

Q. In your direct testimony you mentioned that there were certain techniques with which you were not in complete agreement in the examination of the Waverly dome. Could you explain what those techniques were? A. I believe, sir, I don't think I said quite that. The techniques in their broad aspect I was familiar with and recognized and agreed with the operating people of Panhandle Eastern on the use of them.

The exact details of how some of these techniques were applied, I didn't even go into some of them. That's why I can not say I am in 100 percent agreement with all of them, because in spot checking things, I have not witnessed every maneuver, every calculation, and every core analysis.

Q. Are there any that you have observed that you are in disagreement with? A. No, sir.

Q. In the scope of your operations on this job, do you have any independent work papers or have you made any independent examination of these fields, or have you merely spot checked the work done by Mr. Tompkins and Mr. King? A. With members of my staff, I have several times

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done independent work, the exact knowledge of which was not known to any of the Panhandle Eastern staff. Using

the core logs and electric logs and other information available to us, from time to time we have studied the data, discussed among ourselves what it meant, how thorough it was, if perhaps it should lead to the recommendation of further steps, and ordinarily this data has been taken probably in our heads to conferences with Panhandle Eastern and has been further applied after discussions with the Panhandle Eastern operating personnel and management on what further steps should be taken on Waverly.

Q. But primarily your duties have been to check what Panhandle has done, is that correct? A. That has been one of the primary duties, to check what Panhandle has done, to recommend further steps that they should do to complete the project.

Q. You mentioned in connection with the Herscher field of the Natural Gas Storage Company of Illinois, the presence of a mechanical leak. How do you know that that particular leak was a mechanical leak, Mr. Ball? A. We have evidence taken carefully and over a period of over a year to show that porous and permeable zones between the storage sand known as the Galesville sand and the surface, have not had any gas into them, nor accumulated. Only by some form of mechanical leak could escaping gas by-pass the

intervening permeable streaks between the storage sand and the surface.

Q. Would the possibility of a leak, whether it be mechanical or by a fissure of some sort in the cap rock—is the possibility of such a leak always present in a new storage field project? A. I would say so. You can never be 100 percent sure that there will be no leak until you have tried it with some gas. Panhandle, of course, has tried this with gas.

Q. With respect to Panhandle's having tried it with gas,

you mentioned that the pressure is still dropping, although in your opinion it is equalizing or levelling off. Can you tell for sure if the dropping is because of equalizing or levelling off until it reaches a point of the original pressure in the formation? A. Your question is: Can I tell for sure that that is the only thing that contributes towards this dropping of pressure?

Q. That's right. A. No, you can not. If there were some removal of gas from the reservoir of a very minor nature, that of course would contribute to the drop in pressure. Its additional drop in pressure would be perhaps minor enough that you would not notice it. Any significant leak, however, would upset the normal sliding back to hydrostatic pressure.

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and be noticeable.

I may say that before any gas from a storage field could perhaps leak from any sort of an opening and could get to the surface, it would have to pressure up and fill with gas each of the porous and permeable zones above it, that is, between the storage reservoir and the surface.

Q. Is that what you mean in the latter part of your testimony where you say that above the Platin are other tight beds each of which by itself would be an adequate seal? A. Yes, sir. The tight beds, of course, are interspersed with beds that are looser, and any tight bed that is tight enough that gas can not go through it will cause the accumulation of any leaking gas that comes up to it from underneath in the looser stuff underneath it.

Q. But if your gas leaked out of your St. Peter and even though it leaked to a point where it would be trapped by some other formation, the gas that leaked out of the St. Peter would to a great extent be lost to the pipeline, would it not? A. Some of it certainly would. I would say that in a good percentage of such cases, admitting that every-

thing now is hpothetical, it would probably be possible to drill for that gas and produce it as though you had found a new gas field.

Q. But it is also possible it would move off in some

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other area of the formation or in some other formation and would not become available again to the pipeline? A. I don't think you can say that, because the same structure exists in the higher beds. We have shown that the Keokuk-Burlington has a certain structure with a certain amount of closure. That checked very well with the known structure in the Devonian, and enough test holes, wildcats, have been drilled to the Trenton—and now these five have been drilled to the St. Peter—to show that all the sedimentaries in the region exhibit about the same structure.

How any gas leaking from the St. Peter could get out of that structure, it would be very hard to picture such a condition where it could.

We have this series of inverted bowls, you see. Anything spilling out from one of these bowls is going to be trapped in the next one above it.

Q. However, if you did diffuse out into some of the other structures, it is possible that it would not be feasible to redrill and recover it? A. Yes. There could be conditions where it would be difficult or impossible to get it.

Q. You referred to certain minor shiftings in Trenton pressures resulting from this elasticity of the Trenton cap rock and the effect of the putting of gas in the St. Peter. As we know, only two billion cubic feet of gas has been put

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into the St. Peter, whereas it is intended to put in approximately eight times that amount. Is there a possibility with putting in of this greater volume of gas that there will be further shiftings that might uncover fissures or other points that there may be leaks in the St. Peter into

the Trenton? A. The shifting is due primarily to the increase in pressures in the St. Peter, not so much the additional volume in there—although of course the volume and the pressures go together. The pressures exerted on the St. Peter to inject the rest of the gas will be no higher than they have been to inject the two billion. The rest of the 16 billion will go in at not much greater than the same rates that the two billion has gone in, and the rate of injection, of course, has something to do with the pressure in the storage horizon, but if the company is going to take two or three years to put all the rest of the gas in, the pressures will not be greater than they have been.

Q. With the injection of additional gas, is it not true that the gas will make contact with the cap rock at an increased number of points? That is, the more gas you put in, the lower in the formation the gas will go? Is that correct? A. Yes, sir, that is true, and that is why we felt it advisable to show that the same silty streaks in the Plattin

that were holding the gas on the top of the structure existed over the rest of the structure, and why we continued drilling wells and coring these wells and testing the cores carefully on locations further out on the structure.

Q. Is it possible that there may be fissures or streaking or channelling that may be uncovered by going out further on the structure? A. Well, of course it is possible that there have been joints or minor faults or things. In this Plattin cap rock it is much less likely that these joints have remained unsealed from the time they were first made. The joints that may have been formed were probably concommitant with the folding of the structure, the folding of the whole rock section that made the structure as it is today.

We knew from the conformance of the overlying beds

that most of that folding took place after the overlying beds up to the Pennsylvanian were deposited. In other words, there was not a little bit of folding and more beds laid down and a good bit more folding.

We have reason to think that it has been a good many millions of years since the last folding in the Illinois basin. Conditions at the depth and surrounding pressures of the Plattin and other Trenton limes in this area favor very strongly the resealing of any fractures that might have been

formed at an earlier date.

In addition to that, we have strong evidence to support the impermeability of the Plattin in that the dissimilar waters exist in the St. Peter and the Trenton at dissimilar pressures. These pressures have existed for a good many, probably hundreds of millions of years and have kept these dissimilar fluids separate.

That is, the Plattin has kept these dissimilar fluids separated.

Q. Is there a possibility that considering the lesser specific gravity of the water that there may be a leakage of gas where there would not be a leakage of water, somewhat similar to the process of osmosis? A. I think that the chief differences that would contribute to that would be differences in viscosity. Gas can go through smaller spaces than water can go. However, the permeability relationships we are dealing with here have another variable in them, and that is time.

The viscosity of gas is something like one one-hundredth that of water, and we are anticipating holding gas in this storage field for a matter of tens or at the most, perhaps hundreds of years. The time that the Plattin has held these dissimilar waters apart is probably in the hundreds of millions of years.

It would seem to me that an equation that you would

form between these two sets of conditions would still show you are amply safe in trusting the Plattin.

Q. Mr. Ball, would you agree with Mr. Tompkins that the storage cycle or several storage cycles are desirable in a project of this nature before you could make absolute determination of its characteristics and operations as a storage field? A. Yes, sir. I think that was a very good statement. The determinations of the engineering quantities suchas porosity and permeability that a person can make from cored wells is subject to the limitation on accuracy that the wells represent only a small fractional part of the reservoir they penetrate.

Not only that, but the exact mechanism by which gas that pushes water out of an aquifer enters the more permeable streaks of the reservoir and therefore drives them out to increase their permeability to its full usefulness is not entirely known. So that the prediction of these engineering quantities with any great deal of accuracy is impossible until you actually have the experience with gas.

Q. Would you also agree with Mr. Tompkins as to the limits of accuray of any studies such as he has made and which you have examined, being in the order of ten to fifteen percent?

Mr. Miller: What specifically do you refer to, Mr. Flax? That question is a little general for me. I don't know whether

it is for the witness or not.

Mr. Flax: My understanding of Mr. Tompkins' testimony is that the results that he might expect are such that he would consider a ten to 15 percent error or difference from his estimated figures as being good results in the matter of withdrawal rates of gas from the storage field.

I am merely asking Mr. Ball if he would agree that ten or 15 percent is a good accuracy in such estimates.

The Witness: On some parts of Mr. Tompkins' calculations I think it is a very good one. On the pressures required to move the gas around the way he anticipates, I think that 10 or 15 percent is probably a good accuracy range.

On the actual amount of vertical feet of structure that is available to him in case he should ever want to fill it full clear to the spill point, I think that 10 or 15 percent may be accurate, as we don't know for sure the exact relationship of the interval between the Keokuk-Burlington and the St. Peter.

On the vertical distance down from the top that a given amount of gas will fill, I think he can probably tie his figures down to more accuracy than the 10 or 15 percent. It is a blanket question that is hard to come up with a blanket answer of just plain Yes.

By Mr. Flax:

Q. I appreciate that, Mr. Ball. You have mentioned a number of factors in which he might have 10 or 15 percent

accuracy. Is there a possibility that if there were errors in these individual factors that the errors would become cumulative, so that his final result would be considerably more than 10 to 15 percent in error? A. No, I don't think there is. There is no one basic factor in Mr. Tompkins' calculations that carries through all of his calculations to arrive at a single final result. Mr. Tompkins' calculations are the results of several more or less independent lines of figuring. I see no factor where a 15 percent at one stage of the calculation and another 15 percent at the next stage could affect the accuracy of the resultant cal-

culation enough to prove Mr. Tompkins' figures unusable for this purpose.

Q. As an example, he uses his permeability and his drill-stem test and the conversion of drill-stem test from water to gas and his formation pressures when he goes to his open flow estimates, does he not? A. Yes, sir. He has used a low permeability of three or four hundred or perhaps five hundred millidarcies for all his calculations, which is probably in error by the 15 percent. More likely he is going to be faced with a permeability similar to that given by the average of the wells he is using now of 700 millidarcies.

The estimate of bottom hole pressure from the drill-stem test probably could have been off by your maximum of 15 percent.

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However, the apparent stabilization pressure at the reservoir that the reservoir is now heading towards, which can be measured very accurately with gas when it reaches that, and guessed rather accurately now, shows that he was not near that wild on his drill-stem test pressure.

Where Mr. Tompkins has been forced to be inaccurate, he has erred on the conservative side, and I can not say now that all of his 20 wells will be needed to deliver the gas that Mr. Tompkins plans on having them deliver.

It may be he can get by with 18 or perhaps 15 of them. I will say that I am very certain that Mr. Tompkins' 20 wells will do the job he wants them to do.

Q. There is the possibility of a need for more or deeper wells than he actually has. A. Than the 20 he plans?

Q. Yes. A. For the program he outlines of four billion feet of storage gas, with a cushion of 12 billion, I would say No. There is no chance of that.

Q. One other matter. In your testimony you refer to

the shape and steepness of the structure, "favor gas withdrawals without water trouble."

What do you mean by "water trouble"? A. In any gas reservoir where the gas is contained over water, lowering the wellhead pressures by a great amount,

thereby producing very high percentages of the well's open flow, will eventually suck water into the well bore. Once water is in the well bore, the gas withdrawal rate must be severely restricted and ordinarily for a storage company that means trouble. It means, for example, that a required delivery capacity of 200 million cubic feet per day might have to be cut back towards 50 or 100 million cubic feet, which might not be adequate for the market demands.

The steepness of the structure results in a comparatively greater vertical displacement of the bubble bottom for a given amount of gas injected. So that in injecting the next billion cubic feet of gas, the bubble is pushed down a comparatively great distance.

That also results in the adequate free bore between the bottom of the wells and the bottom of the gas bubble, which Mr. Tompkins has been able to depict in his Exhibit 6.

The shape of the structure being such that most of the contours for the tops of the two separate closures are nearly circular rather than being extremely elongated, means that the wells can be more or less concentrated on the two closures so that laterals connecting them to the pipeline will not have to be excessively long and pressure drops through the whole system should be reasonable without going to extremely great pipe diameters.

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H. G. Swearingen

was called as a witness, having been first duly sworn, was examined and testified as follows:

Direct Examination

By Mr. Miller:

Q. Mr. Swearingen, would you please state your full name, address and business or occupation? A. My name is H. G. Swearingen. I reside at 411 Deckman Avenue, Peoria, Illinois. I am employed by the Central Illinois Light Company at Peoria and Springfield, in the capacity of in charge of gas operations.

Q. How long have you held that position, approximately? A. Approximately 34 years.

Q. What is your educational and employment background, and experience? A. I graduated from high school at Macon, Georgia. I attended Pratt Institute, Brooklyn, New York, and graduated

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as a chemical engineer in 1913.

My employment in the utility business started in 1910.

Q. With what company? A. With the Southern Indiana Gas and Electric Company, which at that time was affiliated with the Commonwealth Southern group of properties.

Q. What was your first contact with the Waverly storage field that is proposed here in this proceeding, and in what position were you at the time you had contact with that project? A. My first contact with the people that owned the Waverly field at that time was in the early part of 1949. Mr. Gordon Felder, one of the owners of Waverly, approached our division manager at Springfield, Illinois, and wanted to sell him gas from Waverly for use at Springfield.

The proposition was eventually assigned to me to investigate the possibilities of obtaining gas from Waverly.

Q. Did you make such investigation? A. I did.

Q. What did that investigation reveal? A. It revealed that the Waverly field was owned by a group of financiers or oil prospectors, most of whom were from Duluth, Minnesota. I found that they controlled oil and gas leases on approximately 8700 acres of land in Morgan County, Illinois, about 20 or 25 or 27 miles southwest

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of Springfield.

They had no idea how much gas was present in the field. They had drilled a number of wells into the Trenton limestone prospecting for oil. On the way down they passed through a gas strata present in the Devonian limestone. Gas was present here at a rock pressure of approximately 400 pounds per square inch.

Over the period they found no oil in commercial quantities, so they merely plugged the well casings below the Devonian limestone where the gas that was present was stored. They perforated the casing and concluded that they had a producing gas well.

I was present when the representative from the geological department of the State of Illinois made some tests on these various wells, but the tests that they made gave no idea or indication of the total volume of gas in the area. They had no data or no core samples, but they had planned to drill one more well into the Trenton limestone for oil.

So we agreed that if they completed this well—

Q. You say "they." Whom do you refer to? A. The Murwood Oil and Gas group that owned the property at the time.

Q. Is that the Duluth people you referred to previously? A. That is the Duluth people, yes.

We made a deal with them that if they would complete the

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well and remove a core through the Devonian and the limestone immediately below the Devonian, the Central Illinois Light Company would stand the expense of hiring a geologist to analyze the core, study it, and see if we could come up with some idea as to a volume of gas that might be present.

Q. What was done pursuant to that arrangement? A. Pursuant to that, the core was removed. We hired the Lewis Engineering Company at Evansville, Indiana, to be present on the well site. We recovered the core and they made the analyses and gave us a report. But from the report, the data was still inadequate to arrive at any satisfactory conclusion as to the volume of gas.

Q. What, if anything, was then done? A. After a number of conferences with the Murwood group, the Central Illinois Light Company management, it was arranged and agreed that jointly we would hire a firm of competent geologists to come in and study all of the available data that might be concerned with determining the volume of gas in the field.

Mr. May: Mr. Examiner, I wonder if counsel will have the witness state when all this took place.

By Mr. Miller:

Q. I wish you would fix the time a little bit better as to the time you started your contact on behalf of your com, any with this project. I wish you would fix the time as

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you go along approximately, of these developments. A. I will do that. We started originally, as I say, in late

1949. The time that we agreed to hire jointly the firm of geologists to make this study of all the data was in the early part of 1950.

Three names were suggested, one of which was the firm of Max Ball and Associates. We hired Max Ball to come in to the area and make a complete study of all the data that was available.

Q. Is that the same firm that Mr. Douglas Ball is associated with as referred to in his testimony this morning? A. That is true. Mr. Douglas Ball made most of the observations on the wells in the area at the time.

Q. Go ahead. A. In due course we received a report from Mr. Max Ball on the area, and his report revealed the fact that there was less than two billion cubic feet of gas in the entire area.

Q. This is in what sand or horizon? A. This is in the Devonian stone. We hired him to study nothing but the Devonian and Silurian limestone.

Q. O.K., sir, go ahead. A. In Mr. Ball's report, he pointed out that an analysis of the core which had been taken from the one well that was drilled showed there might be a possibility of

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developing a storage field in the Silurian limestone, approximately 50 or 60 feet below the Devonian limestone.

Q. What next then did your company do in connection with this possible storage project? A. When we received this report, we collected the data, submitted it to our board of directors, and made a recommendation that they authorize the funds necessary to proceed with the experiment or test to see whether a storage of approximately five to ten billion cubic feet could be developed in the two limestones of the Devonian and the Silurian limestone. This was approved in the late part of 1951.

Immediately we hired a former geologist who had worked

with the Louisville Gas and Electric Company and had developed a water drive gas storage field near Louisville. This geologist's name was Mr. R. E. Stouder. Mr. Stouder came to Waverly, studied the data that was available and immediately made recommendations as to a procedure to follow. He recommended that we drill two wells into the Silurian limestone and drill one outpost well at a distance quite a ways away from what might be expected to be the spill point of the total area.

He also recommended that we obtain additional leases in the area near these outpost wells because he said "You never know what you will run into." So we did. We obtained considerable additional acreage in the area.

In the due course of time the wells were completed.

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They were ready to be tested with natural gas. The Central Illinois Light Company in the meantime had laid approximately a mile and a half or two miles of four inch pipe from the high pressure lines of Panhandle Eastern Pipe Line Company to the well site.

Then arrangements were finally completed with Panhandle to deliver to Central Illinois Light Company at that point sufficient gas to test the storage feasibility of the Silurian and Devonian limestone. These tests were completed, I believe, about July, 1952.

The tests indicated that the structure was too tight—in other words, the porosity and the permeability was so low that—the structures did not take gas in sufficient quantities to justify further exploration for a storage field.

But in the meantime, while all this work was under way, we had received from Dr. Harold W. Scott, who at one time was head of the geological department at the University of Illinois, then head of the department of geology at Cincinnati—we had received from him a complete report, geological report, on the Waverly dome.

Dr. Scott in his report very frankly told us that there was no gas available, there was no commercial gas or oil he was sure, in the Waverly dome. He did recommend, however, that if we were looking for storage that we seriously consider the possibilities of investigating the St. Peter limestone for

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storage.

Presiding Examiner: St. Peter sandstone?

The Witness: St. Peter sandstone, pardon me.

By Mr. Miller:

Q. What, if anything, did your company then do? A. The St. Peter sandstone is considerably deeper than the Devonian limestone, and the cost of the wells was probably 30 to 40 thousand dollars greater to complete a well into the St. Peter sandstone than it was in the Devonian limestone.

Presiding Examiner: Counsel, I notice it is 12:30. Is this a convenient point for you to stop?

Mr. Miller: Yes, I think he is about through. We could finish up his testimony, except for one exhibit that we will bring in after the noon hour.

Presiding Examiner: How long will it take, counsel, to complete his direct testimony?

Mr. Miller: Five minutes.

Presiding Examiner: Proceed.

The Witness: We had made some calculations as to the possible volume of the St. Peter sandstone taking into account the information that had been obtained from the wells drilled by the oil prospectors, and the figure was so staggering that it was a good many times larger than the Central Illinois Light Company could ever utilize as storage. By the same token,

much more expensive to develop.

So rather than turn the field loose, we approached Panhandle on the idea of joining us jointly and exploring the possibilities of storage in the St. Peter sandstone. Panhandle agreed to join us, and about August, I believe it was, 1952, we assigned half interest in the storage project.

We took an option, rather, just prior to this to purchase the Waverly dome, depending on the results of our findings. Panhandle then joined us in the joint project of experimenting to determine the feasibility of the St. Peter sandstone, and Panhandle, having all the facilities and the know-how to carry on the work, the job of conducting the work from that point was taken over by Panhandle and the Central Illinois Light Company was billed for their portion of the expense of those experimental projects.

By Mr. Miller:

Q. When did it become an exclusive Panhandle project about what time? A. During the year 1953 Panhandle continued their experiments, and about December 1953 Panhandle concluded that it would be more advantageous to them in the operation and all of their customers up and down the pipeline, to operate that storage field as a sole ownership.

So at that time, effective December 31, 1953, the Central Illinois Light Company assigned its half interest to Panhandle

Eastern Pipe Line Company in the Waverly storage dome. But reserving for Central Illinois Light Company the right to purchase up to 25 percent of the capacity that might be developed by Panhandle in this storage area.

. . . . . .

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Q. Mr. Swearingen, just before we recessed at noon you made reference to some negotiations you had with Panhandle Eastern Pipe Line Company in late 1953 or early 1954 with respect to a transfer of your company's interest in the Waverly storage project. A. That's right.

Q. To Panhandle Eastern Pipe Line Company. A. That's right.

Q. I hand you a document dated February 1, 1954, a seven-page document entitled, "This agreement, made this 1st day of February, 1954, by Central Illinois Light Company and so forth, and Panhandle Eastern Pipe Line Company," and so forth. Is that the final contract agreement you had reference to? A. That is.

Mr. Miller: Mr. Examiner, at this time I ask that this

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document be identified as Exhibit No. 8.

Presiding Examiner: Exhibit 8 for identification.

(The above-mentioned document was marked for identification as Exhibit No. 8.)

By Mr. Miller:

Q. Mr. Swearingen, did you participate in the negotiations leading up to the agreement which has been identified as Exhibit No. 8? A. Yes, I sat in on all the conferences leading up to this agreement.

Q. Does this agreement correctly recite the agreement of the parties at the time? A. It does.

Mr. Miller: I believe that completes our direct examination of this witness. We have copies of this exhibit that are now being distributed.

Presiding Examiner: Mr. May, do you have any cross-examination of this witness at this time?

Mr. May: A few questions, Mr. Examiner.

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Cross Examination

By Mr. May:

Q. Mr. Swearingen, as I understand your testimony, your company—Central Illinois—became interested in this Waverly Dome or field in about 1949 or 1950. A. Early 1949, yes.

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Q. There had been some wells drilled in this field long prior to that date, had there not? A. Oh, yes. This Waverly Dome or Waverly area down there had been known for a good many years, and there had been wells drilled in there with the prospect of oil prior to the time that the Murwood Oil and Gas Company started working there, about 1945—1945 to 1947, I believe.

Q. Weren't they drilling back in, say, 1938? A. None that I know of. There were a few wells I noticed on some of the maps that were listed in the early part of the 1900's. I don't recall just the figure.

Presiding Examiner: The early part of what?

The Witness: The early 1900's. I think it was prior to 1938.

By Mr. May:

Q. One of the exhibits that has been put in here, Exhibit 3, contains a reference to wells drilled in the early 1900's and the pre-1900's; and then there is also another reference to a well drilled in 1938. You are not familiar with that? A. No. There may have been. I am not familiar with that, although a geologist did study all of the information that was available on the wells, even though they were drilled in the early 1900's.

Q. You are not familiar with whether or not those

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wells were producers or dry and abandoned holes? A. So far as I know there was no oil or gas of any kind produced from those wells.

Q. As I further followed your testimony, you began negotiating with Panhandle Eastern Pipe Line Company in 1953. Maybe my notes are wrong—1952 you negotiated with Panhandle, wasn't it? A. Yes, 1952.

Q. In 1952 Panhandle had a one-half interest and your company had the other half interest? A. We assigned a one-half interest in the area after our experiments on the Devonian and Silurian limestone were completed. They didn't prove successful, but we had this possibility of the St. Peter sand. We took an option on the entire field. Central Illinois Light Company took the option on November 26, 1951. We exercised that option in August 1952, and in October 1952 we asked Panhandle to join us, which they did, on a 50-50 basis to explore the possibility of the St. Peter sand.

Q. Subsequently in 1953 Panhandle acquired the entire interest from your company, Central Illinois? A. About December 1953, yes, sir.

Q. Did your company get permission from the Illinois Commerce Commission in connection with that transaction, that application?

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A. We approached the Illinois Commerce Commission and asked them what authority, if any, would be necessary. They told us to go ahead and do the work and if we found anything, to come back and talk to them.

Q. Do you know whether or not Panhandle Eastern obtained any authority in connection with the purchase from your company of the interest in the Waverly field? A. I do not.

Q. As I understand, Mr. Swearingen, it is not the pur-

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pose of your testimony to testify on the technical phases of the geology of this Waverly Dome. A. No, that is right.

Q. You are giving from the companies' standpoint the historical relationship between the companies and the participation of Central Illinois in the attempted development? A. That is right. The Central Illinois Light Company took the geologist's word for what was to be done and not to be done, and that was it. They didn't question any decisions in the matter.

Q. We are not to question you, then, on any of the geological phases of it? A. No, because I know nothing of that at all.

Mr. May: Thank you, sir.

Presiding Examiner: Any other counsel than staff counsel have any questions of this witness?

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Mr. Seacat: Might I ask a question or two, if the Examiner please?

Presiding Examiner: Yes.

By Mr. Seacat:

Q. Sections 4 and 5 of this contract, Mr. Swearingen, I call your attention to. Do I understand you negotiated this contract with Panhandle for the Central Illinois Light and Power Company? A. I didn't negotiate it personally. I just listened and sat in on all of the conferences that went in to make up the negotiations.

Q. Was the provision here of approximately 58.3 miles of 16-inch pipe line, including three river crossings, which would complete the looping of Panhandle Eastern's Peoria lateral from Springfield to Peoria, part of the considerations of this contract? A. Not entirely.

Q. I said part of the considerations of this contract. A. It probably could be construed that way.

Q. Do you know which side it was that dictated the in-

clusion of these provisions relating to the Peoria lateral in the contract? Did Panhandle demand them or did Central Illinois demand them? A. We signed for additional gas, which led to the necessity of the looping of the Peoria lateral.

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Q. Do you know to what extent that will increase the capacity of the Peoria lateral? A. That I do not know. I do know that the present lateral is—they tell me—completely loaded; and to obtain any more gas in that area there, the line will have to be either totally looped or partially looped.

Q. You don't know, do you, whether or not there is a demand in the area of the Peoria lateral in excess of the present capacity of the lateral? A. Oh, yes, sir, there definitely is.

Q. In excess of the present capacity of the lateral? A. Definitely.

Mr. Seacat: I believe that is all, Mr. Examiner.

Mr. May: Mr. Examiner, may I have a question? I just this moment saw this contract.

Presiding Examiner: That is all right, Mr. May.

By Mr. May:

Q. As I understand from briefly looking at this contract, there is a provision in it, if Waverly Field is developed, giving Central Illinois Light Company an option to purchase gas from Panhandle—25 percent. A. Up to 25 percent of the capacity of the field, any capacity that is developed by Panhandle in the field.

Q. Do you interpret that provision as giving Central Illinois that right to the exclusion of other customers on

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the Panhandle System? A. I interpret it this way. We would have first choice—I will just put it this way—of 25

percent of any capacity that Panhandle might develop on that field.

Q. To the exclusion of other customers on the Panhandle System? A. Up to that amount; up to 25 percent.

Q. The other customers on the Panhandle System, if it is developed to that amount, would be entitled to the balance after you first take your 25 percent? A. If we choose to take that portion of it, the other customers would be entitled to the balance; that is right.

Q. Were any of the other customers of Panhandle Eastern consulted on this matter to your knowledge before you entered into this contract with Panhandle Eastern? A. No, none that I know of. We made no contacts with them.

Q. The negotiations and the contract itself were solely between Central Illinois Light and Panhandle? A. That's right.

Q. Has this contract been filed with the Illinois Commerce Commission? A. Not to my knowledge.

Q. Does your company require any approval from the Illinois Commerce Commission either to enter into or to perform

under a contract of this nature? A. If we went ahead with the development of the field, yes, we would have to come under the jurisdiction of the Illinois Commerce Commission. But up to this point I don't think—in fact, I am sure we haven't filed anything with the Illinois Commerce Commission.

Q. Come under the jurisdiction: Would that contemplate your company filing an application with the Illinois Commerce Commission to obtain their approval of entering into and executing such an agreement or performing under the agreement? A. I don't think so, because the field as far as Central Illinois Light Company has never been developed. It is still in the development stage.

Mr. May: I think that is all, Mr. Examiner.

Mr. Wirth: I have just one question. Mr. Swearingen, on page 6 of this Exhibit 8, Section 7, reference is made to an agreement between the parties dated December 17, 1953. Is that the agreement that you referred to in your testimony as being the agreement whereby Panhandle took over one-half interest in the Waverly project?

The Witness: That's right, it is, yes.

Mr. Wirth: That is all.

Presiding Examiner: Staff counsel.

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By Mr. Flax:

Q. Mr. Swearingen, what is the basis of the sum of $240,000 which, by provisions of Section 6, Panhandle is to pay Central Illinois Light Company? A. That is a dollar value that was arrived at by Central Illinois Light Company as stands on our books for money which we had spent in the test project at Waverly. Prior to that Panhandle had paid us the first half of our cost when they entered into the original partnership agreement.

Q. Does that include what you had paid towards your leases and rentals of the property involved? A. Substantially that is true, yes.

. . . . . .

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Stephen A. Bergman

was called as a witness, and after having been duly sworn by the Presiding Examiner, was examined and testified as follows:

Direct Examination

By Mr. Miller:

Q. Mr. Bergman, will you please give us your full name, residence and occupation with Panhandle Eastern Pipe

Line Company? A. My name is Stephen A. Bergman. I reside at 5819 Riggs Road, Mission, Kansas. I am chief engineer of Panhandle Eastern Pipe Line Company.

Q. How long have you been with Panhandle Eastern Pipe Line Company? A. I have been with Panhandle Eastern since 1941.

Q. How long have you occupied the position of chief engineer? A. Since March of 1954.

Q. Will you give us a brief resume of your education and experience since the completion of your formal education? A. I graduated from the Michigan College of Mining and Technology, with a degree in Civil Engineering; and in 1941, joining Panhandle Eastern, I worked as a field engineer and design engineer in the design and construction of pipe lines

and compressor stations.

In 1950 I became assistant chief engineer and held that position until March of 1954. I am Sub-Group Chairman in B-31, Sub-Committee 8, which is charged with the formulation of a revised safety code for the gas industry. I am a Registered Profesional Engineer in the State of Michigan.

Q. As chief engineer of Panhandle Eastern Pipe Line Company, are you in charge of the major construction facilities undertaken by that company from time to time? A. Yes.

Q. In such position, are you familiar with the physical plant of the Waverly storage project, the proposed physical plant? A. Yes.

Q. The physical plant for the Waverly storage project consists of input production wells, suction and discharge pipe lines, metering and regulating station, compressor station, and a dehydration plant.

Q. Will you give us a little more detailed description, first, of the input production wells?

Mr. May: Excuse me, Mr. Examiner. Are you speaking about physical plant in existence at this time?

Mr. Miller: The proposed plant, the plant that the project will consist of when completed, as proposed. This

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is the background, Mr. May, for the cost estimates that we expect to put in through Mr. Bergman on this project.

Mr. May: That clarifies it. I just wanted to know whether he was talking about existing plant or future proposed plant. A. Eleven inch holes will be drilled to accommodate 8⅝ inch casing. Two presently drilled input-production wells have cost approximately $38,000 each and were drilled prior to the formation of a gas cap or bubble at the top of the reservoir. Input-production wells remaining to be drilled will encounter the gas bubble which will make the drilling more hazardous and an estimate of $40,000 each has been estimated for the remainder of the wells.

Q. Now will you give us a little more detailed description of the suction and discharge pipe lines involved in the proposed storage project? A. There will be approximately 1.15 miles of 30-inch pipeline to be laid on the suction side of the compressor station between the main line and the compressor station, and 5.49 miles of varying sizes of pipeline on the discharge side of the station, for a total of 6.64 miles of pipeline.

The suction line has been sized to 30-inch, since it will be required to handle a maximum of 200 million in one 24-hour day when producing from the storage reservoir. The considerable work of compression required for injection into

the storage sand should be conserved when removing the stored gas.

Discharge pipelines are relatively short and are laid out so that an 8-inch pipeline serves one well and a 10-inch pipeline serves two wells, with a 12-inch pipeline for three wells—this being the largest grouping of wells on one pipeline before intersecting the main trunk gathering line of 24-inch pipe.

Q. What kind of metering and regulating facilities will be installed? A. Adequate metering and regulating facilities will be installed to measure the gas entering and leaving the storage reservoir and to control pressures and flow rates.

Q. Now can you give us a little more detailed description of the compressor station which will be used in connection with the Waverly storage project? A. The Waverly compressor station will consist of one 2,000 horsepower unit and two 1,000 horsepower units that are vertical gas reciprocating engines. The total of 4,000 horsepower will be housed in a building 38 by 85 feet. Auxiliary equipment will consist of two 150 KW engine-driven generators, with air compressors and a boiler for heating purposes—all of which are to be housed in a separate building 30 by 50 feet.

It is planned to cool the engine jacket water, lubricating oil and the discharge gas. The towers for the cooling service

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will all be radiator type towers. The engine jacket water is cooled directly in the tower, while the lubricating oil is cooled in an oil-to-water shell and tube exchanger.

The water from the shell and tube exchanger will be cooled in the finned tube tower. The fans for the water cooling towers are driven hydraulically from the main

engines. Discharge gas is cooled directly in a tower with the fans driven by electric motors.

Q. What kind of dehydration plant, if any, will be used and how will it operate in connection with this proposed Waverly storage project? A. The gas withdrawn from storage will be dehydrated before flowing into the main transmission pipeline. The dehydration facility will be a conventional glycol plant designed to operate at 1000 pounds per square inch gauge maximum working pressure.

Q. Did you participate in the preparation of the cost estimate of the facilities you have described of the Waverly storage project? A. Yes.

Q. How generally did you go about making that cost estimate? A. The cost estimate for the physical plant at the Waverly storage facility is based on unit costs taken from recent experience in the construction of similar facilities.

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The total cost of $2,271,000 for the Waverly storage plant includes 3 percent for the contingencies and represents my best estimate of such cost.

Mr. Miller: At this time, Mr. Examiner, I would like to have marked for identification a document containing several schedules, 1 through 10, which is entitled, "Panhandle Eastern Pipe Line Company, Construction Cost Estimate, Schedule No. 1," to be identified as Exhibit No. 9.

Presiding Examiner: Wouldn't it be a little better for your description to leave off the last line—"Schedule No. 1"—since you have others?

Mr. Miller: That is perfectly all right. Let's eliminate "Schedule No. 1," at least from the description of the exhibit. It is all right to keep it on the document, but eliminate it from the description of the exhibit.

Presiding Examiner: Exhibit No. 9 for identification.

(The document above referred to was marked for identification as Exhibit No. 9.)

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By Mr. Miller:

Q. Mr. Bergman, do you have before you a copy of the document consisting of several schedules which has been identified as Exhibit 9? A. Yes.

Q. Was that document prepared by you or under your supervision and direction?

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A. Yes.

Q. Is it true, accurate and correct according to your best knowledge, information and belief? A. It is.

Q. Are the items, together with the testimony that you have given with respect to the physical plant, self-explanatory? A. I believe so.

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Mr. Wirth: I gathered from your testimony with respect to the compressor station at the Waverly storage that you referred to the discharge and suction side of the compressor station relative to the injection of gas into the field. Is that correct?

The Witness: Yes.

Mr. Wirth: In other words, the suction side in your terminology there was the line between the Panhandle main line and the station?

The Witness: Yes.

Mr. Wirth: Is that because of the fact that you don't contemplate using the compressor in the withdrawal of gas from storage, that you have sufficient pressure in the field?

The Witness: Yes.

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Mr. Wirth: You are setting up a compressor station there for just one-way operation, then?

The Witness: For the time being.

Mr. Wirth: And if you need cross-overs later to pump out of the field; you will put them on later if you decide you need them for withdrawal of gas?

The Witness: That is right.

. . . . . .

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L. E. Hanna

was called as a witness, and after having been duly sworn by the Presiding Examiner, was examined and testified as follows:

Direct Examination

By Mr. Miller:

Q. Mr. Hanna, will you please give us your full name, address, and position with Panhandle Eastern Pipe Line Company?.

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A. My name is L. E. Hanna and my address is 1221 Baltimore, Kansas City, Missouri. I am employed by Panhandle Eastern Pipe Line Company as engineering assistant to the vice president in charge of operations.

Q. Mr. Hanna, will you give us a brief resume of your educational background and your business or professional experience, since the completion of your formal education? A. I received my education at Oklahoma A & M College and graduated in 1943, with a Bachelor of Science Degree in Civil Engineering. Upon graduation I went into military service and spent three and a half years with the army. I was in the Corps of Engineers in charge of different phases of engineering work, both in the United States and in the Southwest Pacific.

In September 1946 I was employed by Panhandle Eastern Pipe Line Company. My principal work consisted of preparing flow studies and capacity calculations for de-

sign purposes in the engineering department. I was thereafter transferred to the operating department to my present position.

My present duties consist of preparing flow studies and capacity calculations for design purposes and for operating purposes; investigation of new designs and methods of operation; aiding the engineering department in correctly sizing the compressor station piping and compressor cylinders; aiding the operation department in scheduling necessary shutdowns; and

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studying the characteristics of the loads on the pipeline.

I am a registered engineer in the State of Missouri.

Q. Mr. Hanna, are you familiar with the physical facilities which were the subject matter of Panhandle's application in Docket No. G-1705 on which a temporary certificate was granted in August 1951, I believe? A. Yes, sir, I am.

Q. Can you tell us what those facilities consisted of? A. Those facilities consisted of one 2,000 horsepower unit at Tuscola compressor station; two 2,000 horsepower units at Edgerton compressor station; 6.56 miles of 26-inch loop on the Houstonia loop; 7.24 miles of 30-inch loop on the Zionsville loop; and 18.2 miles of 26-inch loop on the Edgerton loop.

Q. I believe that temporary certificate was granted on August 14, 1951. Is that correct? A. Yes, sir, that is right.

Q. Have the facilities which you have just described been constructed and placed in service? A. Yes, sir. A portion of those facilities was placed in service in 1951, and the remainder in 1952. The last of the compressor engine additions was actually put in service on April 18, 1952.

Q. Have those facilities been in operation since the dates referred to by you? A. Yes, sir.

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Q. What was the actual cost of those facilities? A. $3,222,638. That is slightly in excess of the estimated cost of those facilities.

Q. How, if you know, was the cost of those facilities financed? A. The funds were provided from a portion of the $20,000,000 3.25 percent debentures issued in July of 1951.

Q. Now, Mr. Hanna, passing to the present proposed expansion program of Panhandle Eastern Pipe Line Company, what studies were made by you in connection with this expansion program? A. Approximately a year and a half ago I was asked to make an extensive study of the various means of increasing the capacity and the peak day deliverability of Panhandle Eastern's system. I was to consider the capacity increase in two possible stages: First, the completion of line 300 loops; and then the installation of additional engines.

As a result of my studies I found that by completing line 300 with 30-inch pipe the system capacity could be increased initially by approximately 100,000 Mcf per day. This would be the maximum available without extensive repiping work at the compressor stations.

At the present time Panhandle has essentially two systems, the so-called low pressure system and the so-called high pressure system, with two compressor services at each com-

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pressor station. In making my capacity studies, I also made use of Waverly storage field.

Q. The proposed Waverly storage field, I assume? A. Yes, sir, the proposed field. I was advised that Panhandle anticipates a peak day deliverability of 200,000 Mcf per day from Waverly storage field. Capacity studies were made to determine the facilities required for the operation

of that field. The deliverability of the field and the injection rate were then incorporated into the main line capacity studies for winter and summer operation, respectively. With a deliverability of 200,000 Mcf from Waverly, the increase in the system's peak day capacity becomes approximately 300,000 Mcf. The sales distribution volumes were furnished to me by the sales department. I also made the capacity studies necessary to provide the lateral capacity for those volumes to the respective customers.

Mr. Miller: At this time, Mr. Examiner, I would like to have marked for identification a map entitled, "Panhandle Eastern Pipe Line Company, Main Transmission System Showing Existing and Proposed Facilities."

Presiding Examiner: Exhibit 12 for identification.

(The document above referred to was marked Exhibit 12 for identification.)

By Mr. Miller:

Q. Mr. Hanna, do you have before you a copy of the map

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which has been marked for identification as Exhibit No. 12? A. Yes, sir.

Q. Was this map prepared by you or under your supervision and direction? A. Yes, sir, it was.

Q. Is it true, accurate and correct according to the best of your knowledge, information and belief? A. Yes, sir.

Q. Will you tell us briefly, Mr. Hanna, what this map purports to show? A. This map shows the proposed facilities in relation to the existing facilities on Panhandle Eastern's system. The solid lines represent the existing pipe lines and the heavy dashed lines represent the proposed pipe lines which are being discussed in this proceeding. The length and diameters are shown alongside each loop.

The existing compressor stations are shown as solid dots along the pipe line, with the installed horsepower at each station below its name. Waverly storage field is shown approximately midway between Pleasant Hill compressor station and Glenarm compressor station in the State of Illinois.

Mr. Miller: Next, Mr Examiner, I would like to have marked for identification a four-page document, including a map as the fourth page, the entire exhibit being entitled "Panhandle Eastern Pipe Line Company's Flow Diagram Data."

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Presiding Examiner: Exhibit 13 for identification.

(The Document above referred to was marked for identification as Exhibit No. 13.)

Presiding Examiner: I have one question with reference to Exhibit 12. You do not show the proposed horsepower at your existing compressor stations. You show only the existing horsepower?

The Witness: That's right.

By Mr. Miller:

Q. Now, Mr. Hanna, will you give us a brief description of the several pages of Exhibit No. 13? But let me ask you first: Was this exhibit prepared by you or under your supervision and direction? A. Yes, it was.

Q. Is it true, accurate and correct according to your best information, knowledge and belief? A. It is.

Q. Now will you give us a brief explanation of the several pages of this exhibit? A. Page 1 gives the Panhandle flow formula by which the facilities on the lateral lines were designed. All the lateral facilities were designed on the basis of winter peak day loads. Therefore the flow tem-

perature was considered to be 50 degrees. An average figure of 0.685 was used for specific gravity.

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Page 2 gives the formula by which the main line facilities were designed. This is a formula we call the modified Panhandle formula, which has been developed in the past couple of years and has been found by several other companies to more nearly handle the conditions in the present day, high pressure, large diameter pipe lines, where the flow rates vary quite widely.

For the purpose of this design, an efficiency factor of 87.5 percent was used. A compressibility factor of 0.000178, which has been determined by test on Panhandle's gas, was used.

A flowing temperature of 75 degrees was used for the summer study and 50 degrees for the winter study. All horsepower calculations have been made from the curve shown on page 3. This curve was prepared from data covering the different types of compressor units on Panhandle Eastern's system. This data covered information concerning suction temperature, super compressibility, valve losses, pocket sizes, clearances, and engine efficiencies.

Some compressor units may operate with less efficiency than that shown by the curve, while some may operate with higher efficiency. But this gives an approximate average for the horsepower on Panhandle Eastern's system.

Page 4 is a diagram of Panhandle's main transmission system showing the equivalent lengths in 24 by 5/16 inch pipe

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between major sales points and compressor stations. The formula shown on page 2 was reduced to one in which equivalent lengths could be most advantageously used.

Therefore by the use of the formula on page 2 and the

equivalent lengths on page 4, the flow studies shown in the following exhibits were made.

Mr. Miller: Next, Mr. Examiner, I would like to have marked for identification a two-page document, the second page consisting of a map, and the first page being entitled, "Panhandle Eastern Pipe Line Company, Summary of Conditions Under Summer Design Capacity."

Presiding Examiner: Exhibit 14 for identification.

(The above mentioned Document was marked for identification as Exhibit No. 14.)

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By Mr. Miller:

Q. Will you explain the two pages of Exhibit No. 14? A. This exhibit is the flow study information pertaining to the operation of the pipeline on a summer day with the main line loops in service. Page 1 of 2 gives the gas balance relating to the flow study shown on page 2. The total deliveries from the main line east of Liberal compressor station are 1,079,000 Mcf. This delivery is supplied by a volume of 803,000 Mcf from the Panhandle and Hugoton fields into the Liberal station, and 275,000 Mcf from Trunkline Gas Company into Tuscola compressor station.

Page 2 is a sketch of the Panhandle system and gives the operating conditions on a summer day which will exist after the addition of the new facilities. The three horizontal lines represent the three pipe lines in Panhandle's system. The line appearing at the top is Panhandle's low pressure line commonly called line 100.

The middle line is Panhandle's second pipeline, commonly called line 200. And the bottom line, which was completed this winter, is commonly called line 300.

The circles represent compressor services at each compressor station. Those stations which have two circles have two compressor services, and those with three circles,

have three compressor services. Where there are only two compressor services at a station, it is necessary to operate

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lines 100 and 200 together through one service and line 300 through the other service. This method is shown by the two lines converging at a compressor station.

The additional pipe is shown as a heavy dashed line with the length and sizes alongside of it. Pertinent information concerning the horsepower is shown below each compressor station. For example, at Greensurg compressor station, which is found in the upper lefthand corner, a total of 16,700 horsepower is required. The station at present has 18,800 horsepower installed. Considering one engine of 1300 horsepower down for overhaul, which would be required in the summer, there would be 17,500 horsepower available for service.

This 17,500 is divided into two services to pump the gas into the three pipelines.

Major delivery points are shown as lines with arrows extending away from the main line. Supplies are shown as lines with arrows toward the main line. Volumes shown on the main lines are the volumes which will pass through the respective section of pipe upon which the figures are shown. The difference between any two adjacent volume figures is the volume which is being delivered from the main line at the point between the two figures. For example, the delivery to Boonville, Missouri, is shown in the upper right hand corner approximately half way between Houstonia compressor station—

. . . . . .

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Q. Go ahead, Mr. Hanna. A. The Waverly storage field is represented by a rectangle, with the name of the field

inside of it. In the summer gas will be injected into Waverly, therefore it is

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represented by a line with an arrow extending away from the line from the main line, which means deliveries will be made from the main line. This operation is reversed on winter peak days.

Where two or more lines become joined near compressor stations, this means that the lines will be operated at a common pressure. For example, the suction pressure at Zionsville in the lower right hand corner of the map, the suction pressure on line 200 and line 300, is 460 pounds. Both compressors services take suction from a common pipe header at that pressure.

. . . . . .

Q. Mr. Hanna, will you give us an explanation of the two pages of Exhibit 15. But first let me ask you: Was this prepared by you or under your supervision and direction the same as the other exhibits? A. Yes, sir.

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Q. Now proceed with your explanation. A. This exhibit shows the winter peak day operating conditions with the proposed facilities added and reflects the maximum capacity of the system. Page 1 again gives the gas balance for the attached flow study showing the volumes available for sale, fuel and leakage as well as the volume supplied to the pipeline.

On peak days in addition to the volume supplied from the Panhandle field and from Trunkline Gas Company, there will be a supply from the Waverly storage field.

Page 2 gives the operating condition on Panhandle's system on a winter peak day with the proposed facilities

added. The sketch is diagramatic of our system and all symbols are the same as in the last exhibit.

. . . . . .

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Q. Do you have before you, Mr. Hanna, a copy of Exhibit 19? A. Yes, sir.

Q. Was that prepared by you or under your supervision and direction? A. Yes, sir, it was.

Q. Is it true, accurate and correct according to the best of your knowledge, information and belief? A. Yes, sir.

Q. Now, will you give us a brief explanation of what that exhibit purports to show? A. Panhandle proposes to install 4,000 horsepower at a compressor station approximately one mile from Panhandle's main line near the town of Waverly, Illinois, to provide it for a maximum injection rate of approximately 100,000 Mcf per day. To provide for a negligible pressure drop from the main line to the compressor station, 30-inch pipe was chosen as the most practical size.

24-inch pipe was selected for the discharge lines connecting the station to the well lines. The 4,000 horsepower is to consist of one 2,000 horsepower un[illegible] and two 1,000 horsepower units in order to provide the necessary flexibility required in

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injecting varying rates in the field and to stabilize the flow in the main line.

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By Mr. John A. McGrath:

. . . . . .

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Q. But there are direct industrial customers in that area? A. Yes, sir, on that lateral system I believe there is.

Q. With your proposed expansion, you will be able to supply the quantities required by these industrial customers? A. No, sir, not on a peak day. These are peak day volumes and do not include any direct industrial volumes.

Q. Not even firm industrial sales? A. No, sir.

Q. They do not include direct firm industrial sales? A. That's right.

Mr. Flax: Is that anywhere in your exhibits, Mr. Hanna?

The Witness: With one exception.

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By Mr. John A. McGrath:

Q. I was going to go through these one by one. Perhaps it might be best. Exhibit 20, are there any direct industrial customers, either on an interruptible or firm basis? A. No, sir.

Q. None are shown. Are there any in that area? A. Not on that lateral, no, sir.

Q. There are none in the town of Arthur? A. No, sir.

Q. Exhibit 21, are there any industrials? A. No, sir, there are not.

Q. Exhibit 22? A. There are direct industrial customers on that lateral, but these facilities have not been designed for volumes going to those customers.

Q. What do you consider Indiana State Reformatory? A. That is a delivery point that Greenfield Gas Company has.

Q. Do you sell gas directly to the Indiana State Reformatory? A. No, sir.

Q. I take it, however, that there are some industrial

customers in this area. Is that correct? A. Yes, sir, there are.

Q. Could you tell me whether they are firm or

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interruptible? A. No.

Q. It is my understanding that this proposed expansion on a peak day would not be able to take care of any industrials. That is why they weren't shown on this map. Is that correct? A. That's right.

Q. Exhibit 23, I believe, is the exception you were going to point out at Anchor-Hocking Glass Company. Is that correct? A. That's right.

Q. That is a firm industrial sale. Is that correct? A. Yes, sir.

Q. Are there any other industrial sales in this area? A. Not to my knowledge.

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Q. Mr. Hanna, will you take your exhibits 18 through 24, and Exhibit 10, and I would like to ask you some questions about those exhibits, if I might.

Referring, Mr. Hanna, to your Exhibit 18, which is a diagram of the Peoria lateral, I think yesterday you gave some round figures—you may have given the exact figures—as to what the capacity of the lateral is now and what it will be with the improvements installed. Do you remember that? A. That is right.

Q. I have 191,360 as the capacity of the lateral when it is completed. Is that correct?

Presiding Examiner: Do you mean Mcf?

Mr. Seacat: Mcf, yes, sir. A. That's right, that is the capacity of that system.

By Mr. Seacat:

Q. That will be the capacity of the Peoria lateral if and when these are installed? A. That's right.

Q. What is the present corresponding figure for the capacity now. It is 131,000— something—

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A. Approximately 131,000.

Presiding Examiner: I would like to request that both counsel and the witness say Mcf, if that's what they mean, or dollars, if that's what they mean.

Mr. Seacat: I understand. I will be glad to watch that.

By Mr. Seacat:

Q. So the enlargement of the Peoria lateral will accomplish an increasing capacity of about 30,000 Mcf. Is that correct? A. No, sir. Approximately 60,000.

Q. I am sorry, my mathematics are bad.

Mr. Hanna, will you tell us how the amount of that additional capacity was determined? A. Those figures that I gave yesterday are the figures which appear on the agreements between Panhandle and those customers in that area.

Q. Is that the present agreement or is that the agreements that were signed as a result of the so-called Waverly letter for a new contract? A. That's right.

Q. So that the improvements planned here are so designed as to provide adequate capacity to furnish the full requirements of the customers under those contracts, isn't that correct? A. Yes, sir.

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Q. Mr. Hanna, is that project, the Peoria lateral, the same project mentioned by Mr. Bergman in Exhibit 10 as Peoria lateral that cost $2,564,000? A. It is.

Q. Is it true with respect to all of these laterals, Mr. Hanna, that the capacity increases were indicated by the

new contracts? Is that correct? The same as in Peoria lateral, the increased capacity that will come into the lateral system is determined by the new contracts. Is that not correct? A. I believe that is correct.

Q. Let's look at Exhibit 20, Mr. Hanna.

Mr. Miller: What number, please, Mr. Seacat?

Mr. Seacat: Exhibit 20, the proposed facilities for service to Citizens Gas Company of Arthur, Illinois.

By Mr. Seacat:

Q. Could you give me the Mcf figures now and when completed? A. When completed, it will be 1,600 Mcf. I can't give you the figure that Citizens Gas Company takes at that point, at the present time.

Q. I have on my notes here a round figure of 1,000 Mcf. A. I said yesterday that was the approximate capacity of that lateral as it is now.

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Q. So there will be an increase of approximately 600 Mcf on that lateral. Is that correct? A. That's right.

Q. Is that the same item as is identified by Mr. Bergman as the Arthur lateral, the sixth from the last, that cost $59,700? A. It is.

Q. Exhibit 21, can you give me the capacity of that lateral when completed? A. Approximately 1,500 Mcf.

Q. Do you know the capacity now? A. Approximately 900 Mcf.

Q. Is that the same item that is identified by Mr. Bergman, the last in his list, Villa Grove lateral, that cost $45,200? A. It is.

Q. Take Exhibit 22, would you, Mr. Hanna. Would you give me the Mcf increase then and now? A. I believe I stated yesterday that the capacity of that lateral will be increased from approximately 3,500 Mcf to approximately 5,500 Mcf per day.

Q. 5,500? A. Yes, sir.

Q. That will be a 2,000 increase, is that right? A. That's right.

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Q. Is that the item that Mr. Bergman identified to cost $85,000 as the Greenfield lateral? A. It is.

Q. In exhibit 23, do you have the same figures? What will the capacity be in new Mcf? A. My statement yesterday was that the capacity in that lateral will be increased from approximately 8,500 Mcf per day to approximately 10,500 Mcf per day.

Q. An increase of approximately 2,000. Is that the item that Mr. Bergman shows as the Winchester lateral to cost $62,000? A. It is.

Q. Exhibit No. 24, referring to the Indiana Gas and Water Company and Kokomo Gas and Fuel Company lateral, the Tipton lateral I think it is known as otherwise. Do you know what the figures are on that, then and now? A. That will be increased from approximately 19,000 Mcf per day.

Q. That is the item marked— A. As the Kokomo-Tipton lateral.

Q. At a cost of $102,000? A. That's right.

Q. And your Exhibit No. 25, the Northern Indiana Public Service Company, Fort Wayne, Indiana, what were the increased figures there?

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A. Increased from 45,000 Mcf per day to approximately 51,000 Mcf per day.

Q. Is that the item that Mr. Bergman said would cost $166,000? A. $166,300.

Q. Those increases are calculated, if I understood your answers to Mr. McGrath's questions, wholly on the basis of gas sold by you for resale, is that correct? A. That's right.

Q. No direct sales in it at all, in these increases here? No direct industrials in the increases? A. Did you mention the Winchester lateral? That was the one exception.

Q. All right, with the one exception. A. That's right.

Mr. Seacat: That is all I have for the present, Mr. Examiner.

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By Mr. Flax:

Q. Then would I be correct in assuming that your balancing figures come into your deliveries to Canad and your deliveries to the storage fields of Michigan Gas Storage Company in the summer? A. That would be an assumption as far as I know. I am not qualified to say.

Q. Were your instructions to find out how much you could get up to Freedom junction with these particular loadings that were given to you prior to Freedom junction? A. No, sir. My instructions were to show the capacity of our system in the summertime with the load distribution that was given to me by the sales department, all excess to be delivered east of Edgerton station.

Q. That is an answer to my question. That is what I

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meant, Mr. Hanna. A. All right, sir.

Q. Who decided that 185 MMcf per day would go to the Detroit lateral, and 303 MMcf per day would go to the Freedom junction point of delivery. A. The proportionate distribution of the excess volume was given to me by Mr. Hager. I determined how much of that excess volume went to those different delivery points. I should say there are two other delivery points in which we have excess gas. That is, the two lines going to Maumee east of Edgerton's compressor station. All excess gas was delivered east of Edgerton's compressor station at those four delivery points.

Q. Was your distribution of excess gas a distribution over and above certain specific delivery volumes that you were required to deliver east of Edgerton? A. Yes, sir.

Q. In other words, you were given specific delivery volumes, then said "See how much you have left over" and then give even percentages with which to distribute what is left over to the four delivery points, the two Maumee and the Freedom and Detroit. Is that correct? A. That is correct.

Q. Could you give the basic delivery figures that you were instructed to provide for east of Edgerton, that is, those

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delivery figures before you distributed the excesses of Edgerton? A. Just one minute, please. The volume that was given to me to be delivered to Maumee from Line 100, or low pressure system, was 31,740 Mcf per day. The volume to be delivered to Maumee from Line 200, or the high pressure line, is 85,000 Mcf per day. The volume to be delivered to Freedom was 2[illegible]095 Mcf per day. And the volume to be delivered to Detroit was 123,540 Mcf per day.

Mr. Miller: What is that last figure again?

The Witness: 123,540 Mcf per day. Please bear in mind, now, these are representative delivery points and can not be pinned down to certain customers.

By Mr. Flax:

Q. By you, that is, Mr. Hanna. A. Yes, sir.

Mr. May: In other words, you are not giving that last figure as the delivery to Michigan Consolidated Gas Company at Detroit. Is that it?

The Witness: That's right.

Mr. May: Someone else is responsible for that? Mr. Hager?

The Witness: I can't say who would be. That figure which I have shown delivered to Detroit includes those

deliveries between the take-off to Freedom and the City of Detroit. There are a number of deliveries in there.

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Q. Mr. Hanna, with those figures as your basic figures, would you tell me the percentages by which you were instructed to divide your excess of capacity over these figures?

Mr. Miller: Mr. Examiner, I assume the percentages are simply a matter of calculation. If it is done proportionately to the volumes, it could be made— A. I would have to refigure them.

By Mr. Flax:

Q. I thought they were given to you as straight percentages, and I thought maybe you might have those percentages at hand. I was thinking from the standpoint of 25 percent. A. You will notice that the excess delivered to the two delivery points at Maumee was 30,000 Mcf apiece. The one to Freedom compressor station was 60,000 Mcf, and the one to Detroit was approximately 60,000 So my instructions were in those proportions. I can't recall now. I could divide them out and give them to you.

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Q. I believe, Mr. Hanna, we omitted Exhibit No. 26, which is the Anderson 18 inch lateral system.

Could you give us the present and prospective capacity in Mcf along that system? A. I believe I said the capacity of the existing 18 inch lateral is approximately 105,000 Mcf per day as shown on the sketch. The increase in capacity comes purely from the new line which Panhandle proposes to construct from its main line into the town of Anderson, which is 21,000 Mcf.

Q. Is that the item that Mr. Bergman shows as costing $125,000? A. No, sir, $291,000.

Q. There was another one, Mr. Hanna, on your Exhibit 18. As I understood it, the capacity there was 131,000 Mcf, as compared with 191,360 Mcf. Do those figures include the so-called Clinton lateral?

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In other words, the whole pattern on Exhibit 18 is included in the two volume figures that you gave me? A. That is right.

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M. M. Farley

was called as a witness, having been first duly sworn, was examined and testified as follows:

Direct Examination

By Mr. Miller:

Q. Mr. Farley, will you please state your full name, address, and position with Panhandle Eastern Pipe Line Company? A. My name is M. M. Farley. My address is 1221 Baltimore Avenue, Kansas City, Missouri. I am employed by Panhandle Eastern Pipe Line Company as manager of the rate department, and have been employed by Panhandle since March 1, 1931.

Q. Prior to your employment by Panhandle, what was

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your business experience? A. I was employed by the Ohio Fuel Gas Company at Columbus, Ohio, as office manager of the gas measuring department. In addition to my duties in this department, I was assigned to special studies in connection with estimating peak day annual requirements of the system and other special studies.

Q. What different positions have you occupied with Panhandle Eastern Pipe Line Company? A. I was initially employed by Panhandle Eastern Pipe Line Company as office manager in the gas measuring department. At a later date I assumed additional duties as chief clerk in the transmission department.

Q. What are your principal duties, Mr. Farley? A. My principal duties at the present time include the preparation of estimates of monthly sales and revenues, the preparation of estimates of peak day and annual gas requirements, in connection with applications for certificates of public convenience and necessity, the preparation of exhibits to be used in certificate, rate and other proceedings before the Federal Power Commission, maintaining progressive

records of actual peak day, monthly and annual sales, preparation of special reports for the Panhandle management and other departments.

From 1946 to date I have testified in numerous proceedings before the Federal Power Commission.

Mr. Miller: Mr. Examiner, at this time we request that there be marked for identification a seven page document consisting of two schedules, the first being of five pages and the second being of two pages and the first schedule being entitled "Panhandle Eastern Pipe Line Company, Market Data, Estimate of Annual and Peak Day Requirements by Classes of Service" and the second schedule of this document being entitled "Panhandle Eastern Pipe Line Company, Tabulation of Contract Demands for the Period Commencing November 1, 1955."

Presiding Examiner: Exhibit 27 for identification.

(The Document above referred to was marked as Exhibit No. 27 for identification)

By Mr. Miller:

Q. Mr. Farley, do you have before you a copy of Exhibit No. 27? A. Yes, I do.

Q. Was that exhibit prepared by you or under your supervision and direction? A. It was.

Q. Is it true, accurate and correct according to the

best of your knowledge, information and belief? A. Yes, it is.

Q. I note that the exhibit consists of two different schedules. Will you please explain the first schedule? A. Schedule No. 1 of Exhibit No. 27 consisting of five pages, is an estimate of annual and peak day requirements by classes of service for the years 1956, 1957, and 1958, and for the peak days during the winters 1955-1956, 1956-1957, and 1957-1958.

This schedule shows the gas requirements of each resale and direct industrial customer. The volumes shown on Schedule 1 for the general service and small general service customers were obtained from the customers, except as noted in the schedule.

However, the volumes shown for the year 1958 are my estimates.

Q. Mr. Farley, let me interrupt you there. Can you tell us when these volumes were obtained from the various customers, approximately when? A. In December 1953, or in January 1954. I might say that these volumes were furnished to us, or the estimates were furnished to us, by our customers in response to our letter addressed to our general service and small general service customers dated December 3, 1953.

Q. And the responses came in during the ensuing

month or two after that, is that right? A. That is correct.

Q. Proceed with your explanation. A. The volumes shown for the limited service customers are estimates based on the following assumptions: The contract demand of the East Ohio Gas Company will be increased from 85,000 Mcf to 185,000 Mcf, based on an agreement between Panhandle and East Ohio dated November 6, 1953.

The contract demand of the Ohio Fuel Gas Company will be increased from 50,000 Mcf to 100,000 Mcf, based on an agreement between Panhandle and Ohio Fuel, dated February 8, 1954.

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The Witness: East Ohio Gas Company is shown on page 2 of Schedule 1 at the bottom of the sheet, the fifth from the last line. Ohio Fuel Gas Company is shown on the same page, the third from the last line.

The contract demand of Michigan Gas Storage under the G-1 rate schedule will be increased by 60,000 Mcf each month

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of the year, pursuant to an agreement dated June 23, 1954. That company is shown at the top of Page 3 of Schedule No. 1.

The contract demand of Michigan Consolidated Gas Company will be reduced from 127,000 Mfc to 87,500 Mfc. That company is shown on page 2, Schedule No. 1, fourth from the last line.

The contract demand of Texas Gas Transmission Corporation will be reduced from 18,000 Mcf to zero. That company is shown on page 2 of Schedule No. 1, second from the last line.

The volumes shown for residential, commercial and direct industrial customers are my estimates.

By Mr. Miller:

Q. Mr. Farley, let me interrupt there. You mean those types of customers of Panhandle? That is, Panhandle's residential, commercial and direct industrial customers? A. That's right, residential being primarily farm tap customers having a clause in a right of way agreement which permits them to purchase gas from Panhandle.

Q. Now Mr. Farley, passing to Schedule 2 of Exhibit 27, will you give us a brief explanation of that schedule? A. Schedule No. 2, pages 6 and 7 of Exhibit No. 27, is a tabulation of contract demand for the period commencing November 1, 1955. With respect to the general service and small general service customers, the contract demands contained in agreements between Panhandle and such customers entered into in the early part of 1954 (commonly known as the Waverly

agreements, or the contract demands contained in the service agreements with such customers, dated September 15, 1954, whichever is higher are shown.

In a few cases there has been no change in the service agreements presently effective on file with the Commission. The volumes shown for the Central West Utility Company represent the amount which I understand we would be willing to contract for assuming no deliveries are made to the Gas Service Company from the Louisburg lateral.

With respect to the limited service customers, the same assumptions have been made in Schedule 2 as were made in Schedule No. 1. In cases where service agreements have been entered into with customers not now being served, the contract demands contained in such service agreements are shown.

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Cross Examination

By Mr. May:

Q. Mr. Farley, in your Exhibit 27, Schedule 1 on page 2, you have listed Michigan Consolidated Gas Company, both the annual and peak-day requirements. I notice in the year 1956 you have a total of 32,025 MMcf on an annual basis. But then a smaller figure of 31,937.5 MMcf in 1957 and 1958.

Is the 1956 figure larger because that is a leap year? A. That is correct.

Q. And then the 31,937.5 MMcf, is that 87,500 Mcf at a 100 percent load factor? A. That is correct.

Q. In other words, in order to determine the annual quantities, you just multiply the 87,500 Mcf by 365 or 366, as the case may be? A. Yes, sir.

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Q. I notice you have opposite Michigan Consolidated Gas Company, as well as some others, a footnote "A" which reads, "Estimated by Panhandle." Will you tell us how you estimated those quantities? A. In that case of Michigan Consolidated Gas Company, that is based on the assumption we will be granted our application to partially abandon service to Michigan Consolidated Gas Company.

Q. Then it really wasn't an estimate by you of the requirements of Michigan Consolidated Gas Company, but rather an assumption by you that this Commission might grant the Panhandle Eastern authority to abandon service to Michigan Consolidated from 127,000 Mcf down to 87,500 Mcf? A. That's right.

Q. Purely an assumption on your part? A. An assumption on my part, yes, sir.

Q. And of course no such aut' orization has been issued to your knowledge? A. That is right, not to my knowledge.

Q. I notice in Schedule 2 of this same exhibit you carry the same volumes, 87,500 Mcf. Then you have in the last column, 127,000 Mcf. The 87,500 Mcf was based upon the same premise in that schedule, was it not? A. Yes, sir.

Q. Purely an assumption?

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A. Yes, sir.

Q. As I understand from Mr. Hanna, you supplied him certain figures for the use of his flow diagram exhibits, Exhibits 14 and 15, Mr. Farley. A. Yes, sir.

Q. Will you give us the breakdown then of the figures you supplied to him for the preparation of Exhibit 14, the 185,000 MMcf on an annual basis during the summer for Detroit delivery? A. That is 185,055 Mcf? That is the figure you have reference to?

Q. Yes, sir. A. Michigan Gas Utilities, Monroe, Michigan, 4040 Mcf. Monroe Paper Products, 1,500 Mcf. Michigan Consolidated Gas Company, 87,500 Mcf. Union Gas Company of Canada, Ltd., 30,000 Mcf. The excess which Mr. Hanna has put in there is 61,515 Mcf, and unaccounted for, 500 Mcf.

Q. As I understand this excess figure of 61,515 Mcf, you did not designate any particular market for that? A. I did not give Mr. Hanna that figure. I gave him the figures on the specific amounts for the various companies. I think he testified this morning he made a computation of that excess.

Q. As a balancing figure? A. Yes, sir.

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Q. That the capacity was there for that amount? A. That is my understanding.

Q. Will you similarly give us a breakdown of the 95,000 Mcf on Exhibit 15 on a peak day? A. Yes, sir. Michigan Gas Utilities, Monroe, Michigan, 7,840 Mcf. Michigan Con-

solidated Gas Company, 87,500 Mcf. Unaccounted for, 500 Mcf.

Q. Maybe I am vague on this, Mr. Farley, but is the Michigan Gas Utilities the customer requirements that Mr. Hanna referred to from the Freedom tap into Detroit? There was some discussion of that, you recall. A. Yes, that is my understanding. It is for the Monroe, Michigan, area.

Q. In giving these figures to Mr. Hanna for the purpose of his flow diagrams, you acted on a similar assumption with respect to Michigan Consolidated which you have heretofore testified to? A. Yes, sir.

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By Mr. Flax:

Q. Mr. Farley, you were present when Mr. Hanna testified, were you not? A. Yes, sir.

Q. On Exhibit 14, Mr. Hanna with regard to that exhibit read into the record certain basic volumes which he said you had given him which would be delivered during the summer day operation to Maumee, Freedom Junction, and Detroit. You were here when those were read into the record, were you not, Mr. Farley? A. Yes, sir.

Q. There also are excess volumes which go beyond the volumes that were read into the record, and which Mr. Hanna indicated he did not know how they would be disposed of. Do you have any idea of how those excess volumes will be disposed of, Mr. Farley? A. No, sir.

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Mr. Miller: We don't propose to offer any further witness on that subject. We will have Mr. Hager here if you want

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to put him on and ask any such questions. I think so far as this exhibit goes and as far as Mr. Farley's exhibit goes,

we have offered all the proof that is required on this sort of thing. If you want to call Mr. Hager or some other official of the company, they will be here later on.

Mr. May: Mr. Examiner, I don't think the parties to this proceeding should be put to that obligation. Here we are confronted with a situation of where Mr. Farley gets on the stand, purportedly testifying with respect to the markets, and we are confronted with a situation where he says, "I don't know; I don't know."

I think we have a vital interest in this case, particularly on this market question. If Mr. Farley doesn't know, Panhandle should present a witness who does know; or Mr. Farley should get himself informed so he will be able to answer the questions on proper cross-examination. I think all the parties are being put to a disadvantage.

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Mr. Miller: Mr. Examiner, we have no desire to withhold anything. We put our witness on to show the engineering, and now we put our witness on to show the market requirements, the demand on this system as evidenced by the agreements and letters of intent and that sort of thing that have been entered into

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At the proper time when these parties come back for further cross-examination, if they are not in a position to answer your questions and you want to ask some questions of Mr. Hager, he will be here. We will make him available to you. We will bring him here. But we don't propose to put on any further evidence ourselves—direct evidence—on this subject you are now inquiring about. But he will be here and he will be available for examination.

Mr. May: My problem is, I asked this morning whether Mr. Hager would be able to answer a market question. I was told no, it is Mr. Farley.

Presiding Examiner: That is right. That is my recollection.

Mr. May: This particular phase, Mr. Examiner, is important to us because it involves the excess quantities available from this Detroit line. I think if Mr. Hager can answer questions like that, all right. I was told this morning he is not a market man; Mr. Farley is the market witness.

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Mr. Shannon: Before he goes forward, I have a statement I want to make on behalf of Michigan Consolidated in that Docket, 2475.

As the record shows, Michigan Consolidated has intervened and has been granted intervention in this docket, to intervene in opposition to the proposed export to Canada.

Michigan Consolidated, as the records of this Commission show, was ready, willing and able to purchase gas which Panhandle has attempted to sell to Canada for storage in Michigan and for sale to consumers. It is our position that Panhandle is

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required by orders of this Commission, and by its own gas tariff, which is now in effect, to sell this gas to Michigan Consolidated. It is further our position that the sale which it is proposing to make to Canada is illegal and is detrimental to the interests of the people of Michigan and the people of this country.

Panhandle is proposing to sell gas to Union Gas of Canada under a 20-year contract. Phys'cally this gas will go right by the City of Detroit. This Commission has very recently reaffirmed its long-standing determination that the public interest requires that Panhandle sell its excess gas to its utility customers. The Commission's

orders require that Panhandle sell this gas to Michigan Consolidated and other utilities which desire it to serve their customers.

Now it is our position that there is absolutely no reason why gas should be exported to Canada by Panhandle when it can not or will not serve the requirements of its customers in the United States.

Canada, as this Commission knows, has vast supplies of natural gas. The Canadian government has recently authorized the construction of a pipeline by Trans-Canada Pipe Line, Ltd., to go across Canada and serve markets in Eastern Canada. It is our position that Panhandle's only purpose in making this sale to Canada is to escape the federal regulation of its rates and make huge extra profits at the expense of the people of the United States.

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If Panhandle sells this gas to its customers in Michigan, Indiana and Ohio, it must do so at the regulated rate of 26.3 cents per thousand cubic feet. This is the maximum that Panhandle can charge and the utilities can pay, and this price includes another rate increase which Panhandle has just placed in effect under bond on January 1, 1955.

However, Panhandle's contract with Union Gas of Canada provides for a minimum price of 35 cents a thousand cubic feet, and this may be raised so that the price to Canada will always be 20 percent more than the regulated price of Panhandle's gas sold in Michigan.

Panhandle claims that the sale of 15½ billion feet a year to Canada will not in any way interfere with service to any of Panhandle's customers in the United States. It is our position that this contention is false. There is a chronic shortage of gas on the Panhandle system, and Panhandle has contended in the courts that it can not be forced to expand its capacity to meet the needs of its customers.

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A few months ago Panhandle said it would expand the capacity of its facilities by 255 million cubic feet a day. Now it has abandoned most of this expansion program and proposes to limit its expansion to only 100,000 cubic feet daily. Any excess gas which Panhandle has available can not be sold to Canada but must be sold under Panhandle's interruptible rate schedules which provide that the first 20 percent be offered

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to utilities with storage facilities. These utilities include Michigan Consolidated.

Half of the remaining gas must then be sold by Panhandle to its utility customers. Michigan Consolidated intends to do all within its power to see that this gas is made available to its customers and that Panhandle is required to comply with its own tariff regulations.

As I said at the outset, we stand ready to purchase all of the 15½ billion feet that Panhandle proposes to export to Canada. We stand ready to purchase this at rates fixed by this Commission. We are entitled to first call on this gas under Panhandle's tariff that is now in effect, and under the Commission's orders.

I therefore under these circumstances respectfully move that the application now filed by Panhandle in this docket to export this gas to Canada be dismissed. I do not think we should be required to waste time in a hearing, waste the time of the parties, including the Canadian parties, in a proceeding which can only result in a denial of the application.

The Commission has determined and has prescribed and there is now in effect in Panhandle's tariff, a requirement that any excess gas that it has must first be offered to its utility customers who have storage. Michigan Consolidated has storage.

It further provides that one-half of the remainder must

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then be offered to its utility customers. We have on file with this Commission a request to purchase from Panhandle up to 100 million cubic feet per day of interruptible gas under Panhandle's filed rate schedule. Under those circumstances, Panhandle could not lawfully export any gas to Canada.

I therefore move that the application be dismissed and I request the Examiner to certify my motion to the Commission.

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Frederick H. Robinson

was alled as a witness, having been first duly sworn, was examined and testified as follows:

Direct examination

By Mr. Miller:

Q. Please state your full name, address, and position with Panhandle Eastern Pipe Line Company? A. My name is Frederick H. Robinson. I reside at 669 Delafield Lane, Riverdale, New York. I am vice president in charge of sales for Panhandle Eastern, which position I have occupied since 1946.

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Q. Mr. Robinson, will you please describe briefly the existing contractual arrangements between Panhandle Eastern Pipe Line Company and Union Gas of Canada, Ltd? A. Panhandle is presently delivering 5½ billion feet of gas annually to Union under a contract dated November 25, 1944 pursuant to authorization granted by the Commission in Dockets G-612 and G-619.

Deliveries to Union are being made during the months

of April through October, inclusive, in each year and are completely interruptible at the discretion of Panhandle. The price being paid for gas currently under the contract is 30 cents per Mcf.

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Q. Go ahead, Mr. Robinson, has your company had any other contractual arrangements with Union Gas of Canada? A. Yes. In 1950 Panhandle and Union entered into a contract dated March 15, providing for the purchase of total volumes of gas up to 18½ billion feet annually. This contract provided for firm deliveries by Panhandle up to 25 million per day, and for varying deliveries of the remaining volumes of gas provided for under the contract.

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Q. Was any application filed with the Federal Power Commission with respect to the 1950 contract you have just referred to? A. Yes. The 1950 contract was the subject matter of Docket No. G-1344, which was consolidated for hearing with Docket No. G-1347. The application was denied without prejudice by the Commission in Opinion No. 218 on the basis that no gas was available at that time for export to Canada on a firm basis.

Q. Mr. Robinson, will you describe briefly the principal terms—that is, as to volumes of new contract with Union Gas of Canada, which is the subject matter of this Docket G-2475?

Mr. Shannon: I will object, Mr. Examiner. The contract speaks for itself.

Presiding Examiner: Do you propose to offer the contract itself?

Mr. Miller: Yes, Mr. Examiner, I do.

Presiding Examiner: Have you stated what your offer is?

Mr. Miller: I am getting ready to. We ask that there be marked for identification at this time a 22-page document entitled "Agreement Between Panhandle Eastern Pipe Line Company and Union Gas Company of Canada, Lts," dated April 21, 1954.

Presiding Examiner: Exhibit 58 for identification.

(The Document above referred to was marked as Exhibit No. 58 for identification.)

Presiding Examiner: Do you care to reframe your question,

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or will you stand on it just as put?

Mr. Miller: I will reframe the question.

By Mr. Miller:

Q. Mr. Robinson, do you have before you a copy of Exhibit No. 58? A. Yes, I do.

Q. Did you participate in the negotiation of that contract? A. I did.

Q. Are you familiar with the terms and provisions of that contract? A. I am.

Q. Is Exhibit No. 58 a true, accurate and correct copy of the original contract that was entered into between your company and the Union Gas Company of Canada, Ltd? A. It is.

Q. Was the contract signed by you on behalf of Panhandle Eastern Pipe Line Company? A. It was.

Q. Now, Mr. Robinson, for the convenience of further consideration of this matter, will you summarize briefly the terms of the contract with respect to volumes?

Mr. Shannon: Mr. Examiner, I am going to object. The contract speaks for itself.

Mr. Miller: Mr. Examiner, it is not a question of inter-

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pretation. I simply, for the convenience of the Examiner and the Commission in the consideration of this matter, want to get on the record in the transcript the principal terms of the contract with respect to volumes, price, term of the contract, and so forth. We are not going into any detailed consideration of matters of interpretation or anything of that sort.

Presiding Examiner: If there is any conflict between the testimony and the agreement proper, of course, the terms of the contract would govern. But I think the question is proper in the interests of clarification. A. This contract provides for the sale of annual volumes of gas from 10,500,000 Mcf the first year to 15,500,000 Mcf in the sixth and succeeding years. The contract provides that approximately one-third of the total volumes deliverable under the contract shall be delivered in the five winter months of January, February, March, November and December, and the other ⅔ during the remaining seven months.

None of the gas is to be sold on a firm basis. Panhandle has the right to curtail deliveries to Union at any time, provided that curtailments do not result in a reduction of deliveries for the five winter months in excess of 12 percent, and in the summer months in excess of 8 percent.

The accumulative deficiency at any November 1 during the life of the contract is not to exceed 10 percent.

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By Mr. Miller:

Q. Now, Mr. Robinson, what does the 1954 contract provide with respect to the 1944 and 1950 contracts with respect to their termination or continuation? A. The 1950 contract is specifically cancelled by the 1954 contract, while the 1944 contract continues in effect in accordance with its terms for the first 785,715 Mcf of gas delivered in the

months of April through October in each year, until a total of 5,500,000 Mcf is reached under the 1944 contract.

Q. What is the term of the 1954 contract? A. The contract provides for a term of 20 years from the first regular delivery of gas under it. The contract, however, is automatically cancelled under certain circumstances, as provided in a letter agreement dated October 26, 1954.

Mr. Miller: At this time, Mr. Examiner, we ask that there be marked for identification a two-page document being a letter from Panhandle Eastern Pipe Line Company, 120 Broadway, New York 5, New York, dated October 26, 1954, and signed by Mr. Fred H. Robinson, vice president, to the Union Gas Company of Canada, Ltd., Chatham, Ontario, Canada.

Presiding Examiner: Exhibit 59 for identification.

(The Document above referred to was marked as Exhibit No. 59 for identification.)

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By Mr. Miller:

Q. Do you have a copy of that letter before you, Mr. Robinson? A. I do.

Q. Briefly what is the effect of that letter? A. This letter agreement provides that in the event that Union entered into a contract for gas supply with Trans-Canada Pipe Line Company or any other pipeline company authorized to bring Alberta Gas to Eastern Canada, this agreement shall automatically terminate one year after Union shall advise Panhandle that Trans-Canada gas is available to Union.

The termination does not take effect, however, until Panhandle has completed one full year of deliveries under the agreement. And if not termination before November 1, 1960, the contract remains in effect.

Q. What is the proposed price of gas under the new 1954 contract? A. The contract provides for a minimum price of 35 cents per Mcf. The price is subject to adjustment based on the price of gas under Panhandle's G-1 rate schedule.

Commencing with the second year of the contract, Union is obligated to take, or if not taken, to pay for, 75 percent of the total volumes deliverable under this contract.

Q. How, if you know, Mr. Robinson, will this new

supply of gas be used by Union? And I refer to Union Gas of Canada. A. Gas under the new contract is being purchased by Union for storage in its own storage fields and for resale to domestic, commercial and industrial customers. In conjunction with its storage fields, Union proposes to sell a portion of the gas to its distribution customers in the City of Windsor, Chatham, London, and other communities in Southwest Ontario, and to resell gas to distributors in Hamilton and other communities.

Union's storage facilities are such that it can buy the gas on the basis set forth in the 1954 contract and supply the needs of its customers without purchasing gas from Panhandle on a firm basis.

Q. Is the proposed service to Union under the 1954 contract dependent on the building of any new pipeline capacity by Panhandle? A. No. The pipeline facilities serving Union presently—that is, those which extend from Michigan to the international border—are adequate to deliver the proposed contract quantities. Since deliveries under the contract are to be made on an off-peak basis, no additional main line capacity will be necessary to deliver this gas to Union.

Q. Are there any new physical facilities at all involved in connection with this proposed sale?

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Q. And that includes the river crossing and the metering and regulating equipment and that type of facilities? A. Yes. All of those facilities in place there are adequate.

Q. If the Commission authorizes Panhandle to export the proposed additional gas to Union Gas of Canada, when, if you know, would Panhandle be able to commence deliveries? A. Panhandle would be able to commence some deliveries in the very near future, but I understand that Union will not be able to accept delivery of appreciable volumes of gas under the new contract until at least six months after authorization is granted by this Commission. The contract provides that Union shall have 18 months after such authorizations to give the required notice that it is ready to accept deliveries of gas.

Q. Mr. Robinson, in compliance with the rules of the Commission in connection with the proposed exportation of gas, did you obtain from the general counsel of your company a written opinion as to whether the exportation was within the corporate powers of Panhandle and whether the company had complied with state laws, rules and regulations. A. I did.

Q. Was that opinion filed with the application in this proceeding, Docket 2475? A. That opinion was filed as Exhibit C in this

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application.

Q. The opinion is dated June 17, 1954, and is from Steptoe and Johnson, 1100 Shoreham Building, Washington, D. C.? A. That is right.

Mr. Miller: Mr. Examiner, we ask that that exhibit C with the application be incorporated in this record as an item by reference.

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Presiding Examiner: The document referred to will be received in evidence under the rules and identified as Item DD.

(The document above referred to was incorporated by reference as Item DD.)

By Mr. Miller:

Q. From the standpoint of Panhandle, Mr. Robinson, what are the reasons for and advantages of the proposed exportation of additional quantities of gas to Union Gas of Canada as now proposed in this docket, G-2475. A. One of the primary reasons for the desirability of this contract is of course the flexibility with which Panhandle can make deliveries to Canada. Union intends to employ their storage fully. They can take large volumes of gas on any one day and suffer a complete interruption on another day, all on short notice.

Another reason is that of course no new facilities are involved in the sale. Another would be that the take-or-pay-for

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provision in this contract sets it apart from much of Panhandle's other business. It shows a willingness on the part of Union to insure the loads which they contract for.

Also, of course, the price which Panhandle secures is satisfactory.

Q. Have you mentioned the load factor consideration from the standpoint of Panhandle?

Mr. Flax: Objection, Mr. Examiner.

Presiding Examiner: On what ground?

Mr. Flax: I think that is a leading question. I think he is cuing the witness to answer what he wants.

Presiding Examiner: It is calling his attention to the subject matter. Objection overruled.

A. I thought I made that clear in my primary reason for

the sale. The load factor of this sale, rather, the ability of Panhandle to deliver much of this gas in off-peak periods, would, of course, greatly improve Panhandle's load factor, and necessarily that redounds to the benefit of all Panhandle's customers.

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Cross-examination

By Mr. Shannon:

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Q. Would you tell us what improvement in load factor this sale to Canada would give Panhandle? A. In general this sale would enable Panhandle to sell gas at off-peak times to the extent that Union would be able to take the gas. I have no percentage figure computed.

Q. In other words, you were speaking in general terms rather than specific? A. Right.

Q. Would you tell us how the price of 35 cents was arrived at? A. That was a negotiated price.

Q. I assume that is true. The whole contracting was

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negotiated, wasn't it? A. That's right.

Q. Would you tell us how the 35 cents was arrived at? A. It was decided that that was an equitable price and a price which Union would be willing to pay, and Panhandle would be willing to accept. It contemplated certain increases in gas costs over the years since the first contract with Union had been made.

Q. Would you tell me how the adjustment of 120 percent of Panhandle's regulated price in Michigan was arrived at. A. In the negotiations Panhandle felt, in view of the escalation in the cost of purchased gas in the field, that it

would be desirable on a contract with as long a term as 20 years to have some measure of protection to hedge the probable increased cost of gas.

As a result of those discussions, it was decided that it would be equitable to peg the price in the contract to the regulated price in Michigan. That was done by an agreement to let the minimum price be the 120 percent of the G-1 100 percent load factor price of gas in Michigan.

Q. So that under this arrangement, Panhandle is assured of always obtaining 20 percent more for the gas that it sells to Canada than if it sold the same gas in the United States. Is that right?

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A. That is what the contract contemplates.

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By Mr. Flax:

Q. Mr. Robinson, have you had requests for deliveries of gas under your interruptible rate schedules? A. Yes.

Q. By what company or companies, Mr. Robinson?

Mr. Miller: May I have the last question and answer read, please?

Presiding Examiner: Read the question, Mr. Reporter.

(Question and answer read.)

A. By Michigan Consolidated Gas Company and at one time by Citizens Gas Company at Adrian, Michigan.

By Mr. Flax:

Q. Have you ascertained whether any other companies than those two desire service of gas under their interruptible schedules? A. No, sir.

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Q. Have you offered any gas under the interruptible rate schedule to any company? A. No, sir.

Q. Mr. Robinson, you have a number of classifications or orders of priority of service set forth in your tariff, have you not? A. Yes.

Q. Generally, the classifications of service in your tariff are firm storage, and interruptible. Is that correct? A. That is right.

Q. Could you tell me what classification of service will gas be sold to Union Gas of Canada in relationship to those three priorities of service which we have just named? A. In the order of interruption, should such a necessity arise, Panhandle, and if Panhandle was selling gas under the I Schedule, Panhandle would first interrupt I schedule deliveries. It would then interrupt deliveries to Union of Canada, after which it would interrupt all of its direct interruptible sales, and after that, I visualize it would interrupt storage company, and then last, it would interrupt firm deliveries to utilities, which were purchasing gas for industrial purposes, and in that amount. And then in an extreme emergency; of course, it might have to interrupt other of the firm gas which was purchased for resale for purposes other than industrial.

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Q. I note that in your contract as you have described it, there are certain provisions as to minimum volumes to be delivered in the summer period, in the winter period, and on an annual basis. Is that correct? A. That is right.

Q. Would the fact that you were approaching the end of any of the specified periods, and that you had not approached selling your minimum volume during that period change the classification in which Panhandle would sell gas to Union of Canada? A. I don't think so. I can't conceive of such a thing happening.

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Q. Suppose Panhandle had only sold, say, during a winter period, 50 percent of what it was obligated to sell to Union of Canada, whereas during the same period it had sold say 90 percent of its obligation to Michigan Gas Storage Company.

Would Panhandle then curtail Michigan Gas Storage Company in order to sell more gas to Union Gas of Canada? A. I can only visualize such an occurrence as the result of force majeure. I think under those conditions Panhandle is protected in this contract.

In other words, Mr. Flax, Panhandle has entered into firm contracts with all of its utility customers, that is, its full requirements customers. We have Waverly storage field which will relieve us of the burden which might be imposed by weather conditions with such full requirements customers.

Since all of our business will be on a contract basis entirely, I can't visualize where the matter of interruption could take place other than by virtue of force majeure conditions, a break on the pipeline or something else.

Q. Mr. Robinson, during your summer period, if the situation arose whereby Panhandle did not have its storage fields filled, whereas at the same time it had not delivered its minimum volumes to Union Gas of Canada, would the gas that Panhandle will have had available then go into its storage fields before it is sold to Union Gas of Canada? A. Yes. I can't visualize any such thing happening.

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By Mr. Shannon:

Q. Mr. Robinson, would you refer to the contract, Exhibit 58, page 6, which sets forth the volumes, paragraph 3. Do you have that before you there? A. Yes.

Q. It says "Panhandle shall have the right to curtail or interrupt deliveries of gas to Union hereunder at any time."

And it goes on to say "Such curtailments or interruptions shall not, however, reduce the volumes deliverable hereunder in excess of the following: (a) During the five months' period November 1 through March 31, inclusive, in the amount of not more than 12 percent of the total volumes deliverable at such period."

Is it your understanding of this contract that the 12 percent represents the maximum reduction that you could make? A. Yes.

Q. In other words, the minimum amount during the five months' period is 88 percent of the scheduled deliveries? A. Right.

Q. And the next provision (b), covers the 7 months' period. I won't stop to read it, but there the figure is

8 percent. A. Right.

Q. So that the maximum reduction would be 8 percent and the minimum deliveries would be 92 percent of the scheduled deliveries? A. That's right.

Q. And that is subject to a further provision that the cumulative deficiency in any one year can exceed 10 percent. Is that right? A. That is correct.

Q. So that you would be obligated to deliver 90 percent of the scheduled deliveries in any one year? A. That's right.

Q. And 92 percent of that scheduled in the 7 summer months and 88 percent of those scheduled in the five winter months? A. That is right.

Q. And that in your opinion is an interruptible contract? A. Yes.

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By Mr. Jerome J. McGrath:

Q. Mr. Robinson, in the event the Waverly storage

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project requires gas for injection during the summer periods or during the off-peak periods, would this contract take precedence over that gas? A. No.

Q. If it became necessary to violate the terms of this contract, you would be required to do so in order to inject gas into the Waverly storage project?

Mr. Miller: I believe that is the same subject Mr. Flax went over.

Mr. Jerome J. McGrath: I wasn't clear, Mr. Miller, if it was the same subject or not.

A. We take the position that deliveries of gas to the Waverly storage field would have precedence over deliveries to Union under this contract. However, as I explained in answer to Mr. Flax' question, we do not contemplate that there would be any failure on our part to meet the contract volumes contemplated by all of our customers once we are able to employ our storage and when we complete our plans.

Q. Isn't the purpose of the development of the Waverly storage project to permit the normal growth of your market without the expansion of your facilities? A. It is to meet maximum day commitments, yes.

Q. In entering into this 20-year contract with Union, have you taken into account what the maximum day requirements of your present customer companies would be?

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A. Yes.

Q. Have you allowed for a growth? A. We contemplate that we will meet the growth of our customers.

Q. But just to button this up clearly, then, taking the hypothetical situation where you required your curtailment

of deliveries to Union below the 8 percent figure here or the 12 percent, in order to inject gas into storage you could do that. You would be required to do that, would you not? A. Yes. Our customers with whom we have contracts would take precedence over our sales to Union.

Q. Where is that contained in the contract, Exhibit 58, any such provision? A. That is not spelled out in the contract. It is just a fact of life. It is something we contemplate.

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Q. Let me put it this way: Is there any provision in the contract, Exhibit 58, Mr. Robinson, which requires that Panhandle, if it should violate the terms of it, should pay damages? A. No, I think I can clear this us, Mr. McGrath. As I explained in answer to Mr. Flax' question, Panhandle endeavors to operate its property under contracts. We have contracts with our utility customers. We have contracts with certain direct sales, industrial customers. Those contracts contemplate maximum day commitments. We intend to live up to those contracts, or subsequent contracts which we shall make.

We intend to fit the Union sale to Canada into that contract relationship with respect to our capacity to sell the gas.

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Does that clear up the point?

Q. I don't think it does entirely, but I will let it go at this time until I study the contract.

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Redirect examination

By Mr. Miller:

Q. Mr. Robinson, on cross-examination Mr. Shannon made inquiry of you with respect to what, if anything had

happened in connection with Panhandle's capacity since the 1950 contract with Union and the Commission's action on that contract in Opinion 218.

Have there been any subsequent developments in connection with the capacity of Panhandle? A. Yes. Panhandle increased its capacity from 550 million to 600 million.

Presiding Examiner: What?

The Witness: Feet a day.

By Mr. Miller:

Q. That is Panhandle's own capacity? A. Panhandle's own main line capacity.

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Q. Is that the increase that there has been some testimony about in this proceeding in connection with the temporary authority granted in 1705? A. That is correct, in Docket 1705, temporary authorization was granted and that capacity was subsequently installed. Then Panhandle embarked upon a program of hydrostatic testing in 1953, some in 1954, which resulted in an increase in capacity from 850,000 Mcf per day to 970,000 Mcf per day.

Q. Those last figures include the Trunkline capacity? A. That is right, Trunkline of course came in also with a rated capacity of 250,000 Mcf per day.

Q. It came in when, if you remember? Deliveries from Trunkline started approximately when? A. In 1952.

Q. October 1951, I believe. A. October 1951, right.

Q. Now, Mr. Robinson, I believe Mr. Shannon also asked you about the 35 cent price in the proposed sale to Union Gas of Canada. He asked about the negotiations and some of the considerations. Were there any competitive considerations involved in the negotiations of that price? A. Yes. Consideration was given to two other sources of supply which possibly would be available to

Union. Tennessee Ga Transmission at that time was contemplating the Niagara gas transmission line to serve Toronto, and the Trans-Canada

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line was contemplated at that time.

Mr. Miller: I believe that is all I have at this time.

Mr. Flax: Mr. Examiner, may I ask a few questions with relation to the redirect? If you would prefer, I can save my questions for the further cross-examination of Mr. Robinson.

Presiding Examiner: They are brief, are they?

Mr. Flax: I think so.

Presiding Examiner: All right.

Recross-examination

By Mr. Flax:

Q. Mr. Robinson, does this plan for the sale of gas to Union Gas Company of Canada provide Panhandle with what is or with what would closely approach a 100 percent load factor operation on its system? A. It would assist toward that end. I can't say whether it would fully provide that.

Q. Mr. Robinson, are you familiar with the proposed Waverly storage field operations to the extent to realize that the proposed operations of Panhandle would not fill up the Waverly storage field to the capacity to which it has been testified they could be filled up to? A. The Waverly storage field, we believe, has capacity far beyond what we immediately contemplate. Our injection of gas into Waverly will, of course, be determined by the requirements of our so-called full requirements customers

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for peak day gas.

Q. Mr. Robinson, if it is determined that Waverly can be operated at a greater capacity, and in order to operate

Waverly at a greater capacity, it is necessary to inject therein additional volumes of off-peak gas, can Panhandle do so? A. If our contracts require it, we will do so. We will do whatever our contracts require.

Q. Would Panhandle increase their contracts to their firm customers if that became evident that there would be additional Waverly capacity? A. Yes, I believe we would. It would depend on the circumstances at that time.

Q. In considering the volumes of gas available for future development of Waverly, would Panhandle consider that the capacity which it has under contract to Union Gas of Canada would be available for future Waverly development? A. Panhandle's reserves are such that, if necessary, we will build additional capacity. That doesn't become a problem. In other words, we contemplate that we will have certain contractual commitments. We intend to meet those commitments. Waverly storage will assist us in meeting them and we will do whatever is necessary in Waverly to meet them.

We will adjust our deliveries of gas, both to Waverly and our capacity of our lines, to meet the market requirements.

. . . . . .

The Witness: I think the answer to that is Yes.

By Mr. Flax:

Q. In other words, if Panhandle were to increase its winter contract demands to its firm customers, and correspondingly increase its injections into Waverly, then under those circumstances Panhandle would cut off deliveries to Union of Canada below its contract volumes to Union of Canada in order to make more gas available for injection into Waverly? A. If it were impossible to bring more gas from the field, I think that is true.

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Q. Even though it would mean that Panhandle would not meet its contract obligations to Union of Canada? A. I think an adjustment would have to be made.

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Thomas Weir

was called as a witness, having been first duly sworn, was examined and testified as follows:

Direct examination

By Mr. Burling:

Q. Mr. Weir, will you give your full name, please? A. My name is Thomas Weir.

Q. What office do you hold with the Union Gas Company of Canada? A. I am vice president and general manager.

Q. Are you also an official of Ontario Natural Gas Storage and Pipelines, Ltd? A. I hold the same offices in that company.

Q. What is the relationship of the Union Company to

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the Ontario Natural Gas Storage? A. Ontario Natural Gas Storage and Pipelines, Ltd. is a wholly owned subsidiary of Union Gas Company of Canada, Ltd.

Q. How long have you served the Union Company as general manager? A. Since December 1942.

Q. Were you employed by Union previous to that date? A. I joined Union first in September 1937 as Secretary-Treasurer and Comptroller.

Q. Are you familiar with the agreement between Union and Panhandle? A. Yes, I am.

Q. Which is Exhibit 58 in this proceeding? A. Yes.

Q. Did you participate in the negotiations of that contract? A. Yes, I did.

Presiding Examiner: Where do you live, Mr. Weir?

The Witness: On the outskirts of Chatham, Ontario, sir.

By Mr. Burling:

Q. Will you explain very briefly how this contract, Exhibit 58, would involve the use of Union Storage facilities? A. Under this contract the annual deliveries are divided between the summer and winter months, or the periods April 1

to October 31, inclusive, and the period November 1 to March 31, inclusive, approximately in the proportion of two-thirds in the summer months and one third in the winter months.

In addition we are at present receiving under an earlier contract from Panhandle Company, dated November 1944, and under an export permit issued by the Federal Power Commission in April 1946, annual volumes of gas totalling 5½ billion cubic feet, all of which is received in the summer months April 1 to October 31, each year.

In order to enable Union Gas Company to take delivery on that basis, we have to store substantial volumes of gas as it is received during the summer months. We are enabled to do so because we have sufficient storage space available in operation, and we also use that storage to meet our peak loads in the winter months.

Q. Did Union construct any facilities in reliance on the 1944 contract? A. Yes, we did.

Q. Will you describe them very briefly? A. We paid for our share of a dual 12-inch river crossing, crossing the Detroit River about six miles south of Windsor and Detroit. We constructed a 16 inch high pressure transmission line from the point at which the river crossing terminated

in Ontario to our storage area in Dawn township, a distance of about 68 miles, I believe, in total.

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We constructed a compressor station at the outskirts of Windsor, Ontario, and added to our compressor station at the storage area in Dawn township.

In addition, we improved the wells being used for storage by cementing and have also, I believe, drilled some additional wells which were considered necessary.

Q. Approximately how much did your company spend in constructing those facilities? A. I will have to refer to a document. I think I can give exact figures. The total original cost, including the river crossing, the 16 inch transmission line, compressor station at Windsor, and additional compressor at Dawn, meter and regulator stations, storage area wells and miscellaneous equipment, was approximately $4,700,000.

Q. Would you now describe in a general way what plans Union has if the contract of April 21, 1954, Exhibit 58 in this proceeding, is approved and an unrestricted export permit granted to Panhandle? A. The purpose of this contract is very largely the same as the purpose of a contract which had been entered into on March 15, 1950, but which did not become operative because at that time the Federal Power Commission—this Commission—found that there was insufficient gas in the Panhandle system to enable it to authorize the export of the gas. Generally speaking, the principal reason for the desire on Union Company's

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part for additional gas on a long term basis is to make natural gas available in the Hamilton, Ontario, market, and the surrounding area served by the operating utility in Hamilton.

Incidental to that and because the construction of the transmission line would enable the additional service, there are other municipalities of lesser size approximately along the route of the pipeline which require natural gas, need natural gas service, and it would be Union Company's purpose to lay laterals to afford that service to at least four or five municipal distribution systems, and additional gas to two other distributing companies at least within reach of our line, or the proposed line.

Q. You referred, Mr. Weir, to certain things the Union Company is going to do. Would Union do that directly or through a subsidiary company? A. Union Company proposes to do that through the wholly owned subsidiary, Ontario Natural Gas Storage and Pipelines, Ltd.

Q. For what purpose was that subsidiary organized? A. It was organized very largely for the purpose which has just been outlined, and the reason for organizing it as a separate company is that the type of operation is completely different from that presently carried on by Union Gas Company.

Union Gas Company presently is mainly a distributing company.

The operations as visualized under this contract would be largely transmission and wholesaling of gas to other distributors, including some gas to Union Company.

Q. Will Union transfer some of its physical properties to the new company? A. Yes, it would do so.

Q. In a general way will you describe what facilities would be transferred? A. We visualize transferring all the facilities through which gas is presently being received from Panhandle Eastern Pipe Line Company, namely the river crossing, the 16 inch transmission line to the storage area, the compressor station at Windsor, and the compressor station and other facilities, including storage wells, at Dawn storage area.

Q. Is it presently contemplated that Union will at all times retain 100 percent control of the storage company? A. There has been no discussion of any other arrangement. We anticipate retaining control.

Q. Mr. Weir, will you turn now, please, to Exhibit No. 60 for identification. In the first place, I would like to ask you if all the various schedules and documents in this exhibit book were prepared under your general supervision and direction? A. Yes, they were.

Q. Will you turn to Tab 1, if you please, which is a map purporting to show a portion of the southwestern Ontario

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pipeline system. Will you give us such discussion of that map as you think would be enlightening? A. This is a map of a portion of Southwestern Ontario, a large portion of which at present has natural gas service, but it also includes the areas for which we intend to make natural gas available if we can do so under the contract and with the necessary permit from the Commission.

To orient one's self on this map, it might be well to note that the bottom of the map is Lake Erie. In other words, this whole area lies generally along the north shore of Lake Erie. It is bounded at the west, starting at the top, by St. Clair River running from Sarnia south into Lake St. Clair, and the Detroit River running down between Windsor and Detroit emptying into Lake Erie.

And on the east it is bounded by the Niagara River running from Lake Erie into Ontario, and the westerly shores of Lake Ontario. In the westerly half of this map will be noted a considerable number of lines which are indicated in the legend as being Union Gas Company of Canada pipelines. That area stretches from Windsor at the extreme west to London, approximately in the center of the map, and from Sarnia in the north, down to Lake Erie.

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That generally is Union Gas Company's present service area, although the Dominion Natural Gas Company does obtain some gas from production fields in that area, and also distributes

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to some municipalities down along the Lake Erie shoreline.

Q. Will you indicate generally what area on this map is covered by Dominion? A. Other than this limited area along Lake Erie shoreline on the westerly half of the map, although the lines are not shown, Dominion does distribute to many municipalities in the eastern half of the map, including St. Thomas, which is shown near the center, south of London, Woodstock, Brantford, Simcoe, Galt, which is a little north of Brantford, and St. Catherine near the extreme East end, and there are other municipalities in between which are not shown.

There is one other distributing company in the Niagara area, including Niagara Falls and Welland, and there is one other small distributing company which serves an area including the town of Aylmer and district, which is not shown on the map, but which is about 20 miles east of St. Thomas near the center of the map. Aylmer and district are served by Central Pipe Line Company, Ltd. to which company we expect some gas would be sold to meet their additional requirements.

On this map is shown in a solid line, starting south of Windsor, the 16 inch line leading up to the Dawn storage area to which I have already referred. Then running easterly from Dawn storage area there is a dashed line running to a point a short distance north of Hamilton. Hamilton, you will note, is at the west end of Lake Ontario towards the easterly

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part of the map. This is the transmission line which we would build if we succeeded in obtaining a permit from the

Commission. And from that main transmission line are shown laterals leading to some municipalities north of the main transmission line, including St. Marys, reading from the west, St. Marys, Stratford, Kitchener, Waterloo, and Guelph. And another lateral leading from the easterly end of the transmission line down to the City of Hamilton.

From the easterly end of the dashed line there is an extension shown which I believe is about 20 miles in length, and it is marked "Future Connection to Trans-Canada line." This extension is shown in dash-dot formation. That is an extension, which if Trans-Canada line is ever constructed, would be built to connect with the terminus of their line near the City of Toronto, not necessarily the easterly terminus, but the point at which they inform us they would make deliveries of gas to the City of Toronto for use in the City of Toronto.

That point also is the dividing point between the franchise area of Consumers Gas Company of Toronto and the franchise area of the United Fuel Investments, Ltd., and its operating subsidiaries, starting from Hamilton.

Q. What sort of gas is United Fuel now distributing in the Hamilton area? A. They are distributing a coke oven gas of about 525 Btu, I believe.

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Q. Have there been any negotiations, Mr. Weir, by Union direct or through its subsidiary, the Ontario Natural Gas Storage and Pipelines, Ltd., with the Dominion Company looking to the possible sale of a supply of gas to that company? A. There have been discussions between officers of Union Gas Company, and these same officers are officers of Ontario Natural Gas Storage Company, with representatives of the Dominion Natural Gas Company, as a result of which they have indicated an interest in additional sup-

plies of gas, and have indicated the volumes which they would be interested in.

There has been no formal contract completed, but we feel that there will be no difficulty in reaching an agreement based on which a formal contract could be completed.

Q. What about United Fuel Investments? I suppose in view of the fact that that is virtually a wholly-owned subsidiary, there is no problem of an arrangement there? A. That is partially true. On the other hand, it is not a wholly-owned subsidiary. There are shareholdings outstanding in the hands of the public, but Union Gas Company holds about 99 percent of the controlling stock.

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However, it is a little different from a wholly-owned subsidiary, and we anticipate completing a formal contract. There have been probably more detailed negotiations with the United Fuel Investments, Ltd., than with Dominion Natural Gas Company, and the thing did proceed to the stage, or this question has proceeded already to the stage, where the board of directors of United Fuel Investments, Ltd. has authorized representatives of the company—including the president of the company and the general manager and I believe myself as one of the members of the board—to negotiate and complete the contract.

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Q. I just started to ask you to explain Schedule 2 of Exhibit 60 for identification. A. Schedule 2 is the westerly half of the area shown in Schedule 1. It again shows the presently existing lines of Union and the little circular marks indicate the markets presently being served by Union.

The main market is Windsor at the westerly end of the map, London at the easterly end of the map, Sarnia at the

northern end, and Chatham—the head office of the company—lies about midway between Windsor and London.

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These are the larger municipalities. That is why they are shown as they are. Wallaceburg also is a fair-sized municipality with a fair amount of industrial load. That is midway between Chatham and Sarnia, not quite on a direct line, slightly west of a direct line.

In addition this map shows the storage areas which I expect will later be referred to by our chief geologist in giving his testimony and it shows the various production fields in that general area. That is, fields from which we obtain gas now.

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Q. How does Ontario rank as compared with the other provinces in Canada with regard to volume of industry? A. Some of the other provinces might not agree with me, but I think Ontario probably is the principal industry province in Canada, and this area is the area in which the industry is largely located. Montreal has considerable industry.

I am not in a position to actually give figures showing the comparisons. But there is no question whatever in my mind that so far as Ontario is concerned, this is the area where industry is going to develop.

I don't know what the feeling is about the Seaway, but Lake Ontario, or Hamilton being on Lake Ontario and other municipalities around that general area, and Windsor being on the Detroit River, I think this whole area is bound to benefit or become more active industrially as a result of the Seaway.

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Cross-examination

By Mr. Shannon:

Q. Mr. Weir, you testified at some length, I think it was back in 1950, wasn't it, with respect to a plan somewhat similar to this? A. Yes, sir.

Q. As I recall the situation according to your testimony, Union Gas owns the distributing company in Hamilton, which is now on a manufactured gas basis. A. No. Union Gas Company owns about 99 percent of the controlling stock, but there are other stock issues in the hands of the public——

Q. Small? A. Not small, but the voting stock is in the control of Union.

Q. Hamilton doesn't have gas and you would like to put gas into Hamilton. I think that was your situation in 1950, was it not?

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A. Hamilton doesn't have natural gas, that is right.

Q. Basically that is what this Panhandle plan contemplates, isn't it, that it will be a means by which you build a line as shown on Schedule 1 of Exhibit 60 over from the Dawn field to Hamilton that you will put natural gas into Hamilton? A. That is correct.

Q. That is the real core of the plan. Would that be right? A. That is right.

Q. I assume you would not want to make that investment to build that line across Ontario and convert a large city like Hamilton to natural gas unless you were assured of a gas supply. That's right, is it not? A. That is so, for a sufficiently long time in the future.

Q. I believe in one of your earlier questions, either your counsel or yourself referred to an unrestricted export

permit. If my memory serves me right, we had some discussion about that back in 1952, also, didn't we? A. Yes.

Q. What do you mean by unrestricted export permit? A. What I personally have in mind is a permit which would be in terms which would give sufficient assurance to our board of directors that service, having once been started, would be continued during the period of the contract. I think

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it would go further than that actually. In addition to satisfying our board of directors, it would have to satisfy the financial people from whom we would expect to borrow the money to lay this line.

Q. You would also have to satisfy the authorities in Canada, would you not, before you could convert these towns, particularly Hamilton? A. We would certainly want to give the municipalities assurance of twenty years' service. It would be necessary to give them assurance of twenty years' service before they could borrow the money necessary to convert from manufactured gas to natural gas.

Q. So this plan is predicated, necessarily, as you see it, upon you having an assured gas supply from Panhandle for the term of this contract. Is that right? A. Yes. In essence that is so.

Q. Subject only to force majeure or something like that. Would that be right? A. Yes.

Q. It wouldn't be possible or practical to convert Hamilton and these other communities on any other basis. Isn't that right? A. Except on a basis of a gas supply with that length of assured service.

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Q. Do you have a restriction on space heating at the present time? A. Yes. Each individual installation of

space heating require a permit from the Ontario Fuel Board, which is the controlling government agency.

Q. Have those permits been granted? A. There have been permits granted. Whenever we have installed space heating, it has been installed with a permit.

Q. In other words, if I were living in one of your communities and wanted gas in my house, and I went to the Board and said, "I would like to put gas in my house," and the Board gave me a permit, would you furnish me gas service? A. If the Board gives a permit, we would furnish gas service.

Q. Has the Board been giving gas permits? A. Yes, they have to some extent.

Q. You say to some extent. Do you know approximately how many space heating customers were added during 1954? A. In 1954 there were more than in any previous year. This is a rough estimate. Up to the end of December, I would

think in the neighborhood of 5,000, which was catching up on a backlog of applications unsatisfied up to that time. Even with that 5,000 in, there are still a considerable number of applications listed which are not yet satisfied.

Q. Have they been approved by the Board? A. Those that were installed were approved by the Board. Those that are listed that are not yet installed have not yet been approved by the Board.

Q. Would this generally be correct, Mr. Weir, that apart from the desire to convert Hamilton to natural gas and these other communities, Union Gas Company is getting along all right—maybe not as good as you would like to do, but generally all right—with your present sources of local gas and your present supply from Panhandle of 5.5 billion feet? A. No, we don't look on it in that way. We don't feel we are adequately serving the market as we feel we

should as a public utility. It would be a very short time before we would have to say to the customers that we can only see gas supplies in sight for probably four or five or six years in the future to satisfy what is on our line now. We would start going downhill after that year.

Q. Looking four or five years into the future, isn't your source of supply the Trans-Canada line from Western Canada? A. There is no assurance as yet that the Trans-Canada line is going to be built. Trans-Canada has not yet been authorized

to build that line completely. They were incorporated, and the corporate powers included powers to lay gas lines, oil lines, and many other things.

But before they can build any such line they have to have a permit from a federal government agency, the Dominion Board of Transport Commissioners. Up to now they only have a limited authority from that Board to proceed with their investigation as to the feasibility of building the line; and before they can obtain a final permit they have to go back to the Board and show complete details as to their ability to finance and build the line.

According to newspaper reports, they were just recently granted a postponement of the date by which that must be done, until April 30, this year.

Q. If and when the Trans-Canada line is built, your company would take its gas supply from that line, would you not? A. That is provided for in this contract. This contract would be cancelled and we would switch to Trans-Canada.

Q. Where would you take those deliveries? A. At the easterly end of that dash-dot line, where that line ends at the easterly side of the map. That is the point, by the way, where gas is now being delivered to Consumers Gas

Company from the Niagara Transmission line, and it is also the point at which Trans-Canada proposes that they would deliver

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to Consumers Gas Company if the Trans-Canada line is built.

Q. So that you are sure the Trans-Canada line would come to that point, and you are providing a connection to that point? A. We are not sure they will come to that point. If they come at all, we are sure they will come to that point.

Q. Did you approach Panhandle to negotiate this new contract or did they approach you, Mr. Weir? A. We have had conversations periodically ever since our 1944 contract; and more probably since we failed in the 1950 contract we have tried to keep in touch with them to see whether any changes in the system would afford a better opportunity and more justification for obtaining an export permit. They have known right along that we were still interested in that gas supply, and it became even more urgent after the permit was granted to the Tennessee Gas Transmission because we realized that, skirting the City of Hamilton, the pressure would be on to get natural gas for Hamilton.

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Q. Can you give us any light on how the price of 35 cents was arrived at? A. That was the price which Panhandle felt they ought to have—must have. There was no alternative source of supply. So far as Union Company was concerned, we were interested in ascertaining whether we could afford to pay 35 cents and distribute the gas in competition with other fuel.

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We found on study that we could, and on that basis we had little choice but to agree to a 35-cent figure. There is no other source; we needed the gas; that was the logical source. We already had facilities in place which would enable us to bring in this additional gas without duplicating facilities already in place, and also enable us to make use of our storage area on the way through to Hamilton and these other markets.

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Cross-examination (Resumed)

By Mr. Jerome J. McGrath:

Q. Mr. Weir, do you presently sell interruptible gas?

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A. Do you mean on the Union Company system?

Q. Yes, gas on an interruptible basis. A. All the industrial gas we sell is interruptible. It is sold on a permit issued by the Ontario Fuel Board, and the permit specifies that it is interruptible.

Q. What generally is that gas sold for, for what use? A. I should say practically 100 percent for processing purposes such as automotive factories, glass works, drying, glasses, bakeries, and similar purposes?

Q. Do you mean direct heat application as distinguished from steam processing? A. That's right. There is nothing that is generally described as boiler fuel in it.

Q. Would the availability of natural gas from Panhandle in the increased quantity shown in the contract, would the receipt of that gas enable you to make more interruptible sales than you are presently doing? A. We could possibly replace some heavy oil, but at the price at which the gas

will have to be sold, I don't think we could replace anything other than heavy oil, anything cheaper than heavy oil.

Q. You mean the gas would not be competitive with coal? A. I don't believe it would be for industrial purposes.

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Q. I take it, however, that the major portion of the gas that would be purchased from Panhandle would be stored in your storage fields. Is that correct? A. The only part that possibly won't go through storage would be the minimum requirements in, for instance, Windsor. We might take off at Windsor the minimum requirements at Windsor. But the rest of it would go on through storage.

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Q. Do you understand that your contract with Panhandle

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would permit Panhandle to cut back service to you in order to make use of such gas that would be then available in its storage facilities? A. My understanding is that Panhandle can interrupt service to us at any time; but in the winter season they can't interrupt to a greater extent than 12 percent of the volume set out as deliverable in the winter season; or 8 percent of the volumes deliverable in the summer season.

Cumulatively, on any November 1, they can't be in arrears more than 10 percent. Subject only to that, they can interrupt at any time.

Q. Then it is of no concern of yours particularly as to what priorities of service you have in the Panhandle

order of priorities, just so Panhandle is able to meet that contract. Is that correct? A. We are completely dependent on Panhandle with respect to that.

Q. By the same token, except for conditions that can be termed as force majeure, you are not concerned with what excuses Panhandle may give as to why they can't serve volumes of gas that are contained in your contract? A. Speaking of a hypothetical case, our experience with Panhandle so far in deliveries of gas have been such that we don't anticipate that there is going to be any justification for anticipating that they won't live up to something

that they are permitted properly to do.

Q. I am not inferring that, Mr. Weir. All I am asking is that it is not your concern of where Panhandle gets the gas. Your main concern is that the contract is lived up to. A. That is true. And if there are interruptions, that it is not an interruption that is justified under the export permit which may be granted.

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By Mr. Burling:

Q. Mr. Weir, this morning when you were talking about the franchise situation in the City of Stratford, I believe I understood you to say that up until two years ago natural gas was distributed in the City of Stratford. Did you mean that? A. I didn't. I am told I said natural. I intended to say manufactured gas. There has never been natural gas distributed in Stratford.

Q. I just wanted to get the record straight on that. One other question: In answering some question put to you by Mr. Flax you made some reference to court procedure in the event of Panhandle's inability or failure to deliver under the contract. Would efforts be made short of court procedure to

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adjust things amicably or on some other basis than litigation, if possible? A. We certainly wouldn't go to the courts unless we felt we had used every other effort short of going to the courts to persuade Panhandle to live up to the contract to the extent that they are permitted properly to do so. I think the question was: What action could we take? There is no provision, as I understand it, in the contract covering such a contingency.

So, failing any amicable arrangement, we wouldn't have any other recourse except to the courts.

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Frederick R. Palin

was called as a witness, having been first duly sworn, was examined and testified as follows:

Direct examination

By Mr. Burling:

Q. Mr. Palin, will you give your full name, please? A. Frederick R. Palin.

Q. Where do you live? A. 236 Elizabeth Street, Chatham, Ontario.

Q. What is your position with the Union Gas Company? A. I presently hold the position of Assistant General Manager, Secretary and Treasurer.

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Q. Do you also hold a position with the Ontario Natural Gas Storage and Pipelines, Ltd.? A. Yes, sir, I hold the same offices with that company.

Q. What offices in United Fuel Investments? A. I am comptroller, secretary and treasurer of United Fuel Investments, Ltd., and each of its subsidiary companies.

Q. Do your duties include the making of market forecasts, the determination of rates and matters of that kind? A. Yes, sir.

Q. Have you ever testified about such matters in rate hearings or other legal proceedings? A. Yes, sir.

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Q. Mr. Palin, will you turn to Schedule 14 of Exhibit 60. I see this is an eight page schedule altogether. Will you describe the thing in general terms, first of all? A. Schedule 14 is designed to show the estimated revenues, expenses and net income of Ontario Natural Gas Storage and Pipelines, Ltd., during each of its first five years of operations under the Panhandle contract.

Page 1 is the summary sheet showing the totals of revenues, expenses, and net profit from utility operations and net profit or loss after all charges.

Page 2 of the schedule shows the estimated volumes and value of gas to be sold to the proposed customers, Ontario Natural Gas Storage and Pipelines Ltd., during each of the five years.

Q. There is an item down the page there "Interruptible Gas." Is any of that boiler fuel? A. No, sir.

Q. One line there, Union Gas Company of Canada, Ltd., 1,000, that carries right across in each year. Will you explain what that figure represents and why it seems to be so constant? A. That represents gas that we anticipate will be available to be sold on an interruptible basis in the

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markets of the Union Company in each of those years. It is shown on a uniform basis as the total volues that are made available to the Ontario Storage Company would permit of such sales in those markets. There would be a very much larger market for interruptible sales, but the

company does not choose to obtain such natural gas to serve any larger market. That gas is available to be transferred to the firm gas sales if the forecasts have been too conservative and we do have a higher demand than anticipated. Admittedly, it is a small percentage of the total involved here, but the gas would be available under the contracts to take care of that sale.

The revenues have been calculated by applying the proposed rate schedule as shown on Schedule 13.

Q. In these figures down at the bottom there, under "Interruptible Gas," where it is in dollars, what commodity rate has been used in figuring that? A. That is applying the commodity rate of 43 cents per Mcf.

The next page, page 3 of Schedule 14, is the "Cost of Gas Send Out."

The first section shows the volues of gas contemplated to be available to Ontario Natural Gas Company. That consists of gas being purchased under the existing contract of November 25, 1944, with Panhandle, and the volumes which it is

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anticipated will be purchased under the April 21, 1954 contract with Panhandle.

The schedule also shows the total gas requirements of the company on the system represented by the line shown as volume sales, plus company use and unaccounted for.

Q. What does that company use consist of, principally? A. "Company use" would be gas used in compressor stations and other facilities operated by the Ontario Natural Gas Storage Company, which indicates the total estimated sendout as detailed on Schedule 6 of this exhibit 60.

Under "Net Volume Into or Out of Storage," it shows the balance of gas in the first two years, which will be available for a net increase in storage. In the third, fourth

and fifth years, there will be a small decrease in net volume in storage at the end of those periods.

The final section of this schedule shows the cost of the gas send-out by applying the estimated prices which will prevail under the contracts covering the total volume of gas as purchased from the Panhandle Company.

The 1944 contract based on 30 cent gas, the 1954 contract based on 35 cent gas, and in each instance, with three cents added for Canadian import duty.

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Q. Will you turn to Exhibit No. 61 now, please, Tab C. Will you proceed to make such explanation of this as you care to? A. Exhibit 61 covers certain phases of the operation of Union Gas Company of Canada, Limited, Schedule C being the statement of the utilization of gas over the years 1946 to 1954. I might mention that all of these schedules, unless otherwise indicated, are prepared on a fiscal year basis. The fiscal year of the company ends on March 31. The 1946 to 1954 years are on an actual basis, and the figures for the year ending March 31, 1955, are on an estimated basis.

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Q. Will you look at lines 14 and 15. Is it contemplated that the Union Company will continue throughout the twenty-year period of the contract under discussion here to sell interruptible gas? A. Yes. Schedule C, of course, covers the past operations of the company; and all industrial gas has been shown as interruptible, I believe. I believe it has been already explained by two previous witnesses that in Ontario, industrial gas is sold on permit, and is subject to interruption before any other type of service in the event that the gas supply fails or some emergency arises on the lines.

For that reason, for the purpose of Schedule C, we have included that gas, that is, all of our industrial gas, as interruptible. We contemplate that we will continue to sell industrial gas in the future if the Panhandle contract of 1954 is placed into effect, and that at that time the type of gas that we show as interruptible on this statement will be treated as a more firm type of sales, and on the later schedule dealing with the future periods, that is shown as firm gas in future years.

Q. Now, turn to Schedule "I".

Will you proceed to make such explanation as you care to of that? A. Schedule I is a short statement as to the estimated basis on which the Union Company will finance its interest in

Ontario Natural Gas Storage and Pipe Lines, Limited. Union Company will acquire a total of $22,500,000 par value of the bonds, debentures and common stock of Ontario Natural Gas Storage. For those securities, they will transfer assets having a value of $6,700,000 to the storage company and make a cash payment of $15,800,000.

It is anticipated that Union Gas Company will acquire the required cash from an additional issue of its own first-mortgage bonds in the amount of $11,000,000, and the sale of debentures in the amount of $5,000,000, which, before providing for financing costs, will provide a total of $16,000,000.

There is enough flexibility under the present bond mortgage of the Union Company to provide for the issue of an additional series of first-mortgage bonds to take care of this commitment.

The second page of Schedule I shows the capital structure of the Union Gas Company when such financing is carried out. The first-mortgage bond issue, of which there is now $8,000,000 par value outstanding, will be increased

to $19,000,000; there will be $5,000,000 of debentures, and the common and surplus as of March 31, 1954, the date of the close of our last fiscal year, $19,166,000, showing a total capitalization of $43,166,000, of which 44.4 percent will be represented by common stock and surplus.

As previously mentioned, the company still has approximately

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300,000 shares of its own stock in the treasury available for issue if additional funds are required from that source.

Q. Will you turn to Schedule 1-1. I will ask you first of all if this is a true copy of a letter received by Union Gas Company dated December 29, 1954, signed by R. B. West, Director of A. E. Ames and Company, Limited? A. It is.

Q. Is the attachment referred to therein, which comprises pages 2 and 3 of this schedule 1-1, the same letter that you previously identified under Schedule 12-A of Exhibit Number 60? A. It is.

Q. Did you participate in any conversations about this project with the A. E. Ames Company? A. Yes, sir, I was required to furnish them fairly complete information, financial information, on the proposed company, the operations of the company, and the manner in which it would be financed. After lengthy discussions with them——

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The Witness: As a result of those conversations and meetings, the firm of A. E. Ames and Company, Limited saw fit to issue to the company the two letters dated December 29, 1954, as appearing on pages 1 to 3, inclusive of Schedule 1-1 of Exhibit 61, stating in their opinion that the project was feasible and could be financed along the lines we proposed.

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By Mr. May:

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Q. Yes. That is what I want to get straight on. Of the additional quantities to be purchased from Panhandle Eastern, the total figure for interruptible gas to industrials is 2,500 MMcf. Is that correct? A. In the third to the fifth years, inclusive, that is

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right.

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Q. And of that 21 billion cubic feet, 2.5 billion cubic feet will be used for interruptible industrial purposes? A. Yes, sir. We feel it is available for that purpose if it isn't required for firm load in any of the markets.

Q. Isn't it your proposal here to sell it on an interruptible basis to industrial consumers? A. Yes, sir.

Q. That is the presentation you are making here? A. Our entire market study indicates that that would be available for that purpose.

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Q. Has any survey been made of that interruptible industrial market? A. Yes, sir. Our company has made surveys from time to time as to the availability of interruptible gas load in our markets.

Q. Is that a general survey, or do you have any particular interruptible customers to be served with these quantities of gas? A. There was a general survey made which indicated—the last one that was made indicated that substantially very large volumes in excess of this could be used for industrial purposes if we had it available. But we don't have any interruptible gas available now. We don't contemplate we will have it in the future, except to

the extent in the Union territory I am talking about, 1 billion feet per annum.

Q. You may have answered my question, but I think only partially. Another part of it was: Did you have any particular interruptible industrial customers in mind in providing for these quantities? A. No. This billion feet per annum is not earmarked for any particular customer.

Q. How about the 2,500,000,000 cubic feet figure? A. 1,500,000,000 cubic feet of that is available for customers of United Fuel Investments Limited. The same situation exists there. A general survey was made, indicating

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that there would be a large available market for interruptible gas. These figures indicate that 1,500,000,000 will be available to those customers.

Now we haven't in the case of United Fuels allocated that to the individual customers concerned at this time.

Q. But the economics of your project are based upon including those sales of interruptible industrial gas? A. Yes, sir.

Q. All your figures on the economics of the project have included that item? A. Yes, sir, the sale of that gas at the commodity rate of 43 cents. The demand rate would not apply to any part of that gas.

Q. In addition to this interruptible industrial gas, you have your firm industrial gas, which is also included in these figures? A. Yes, sir, firm industrial gas which is the industrial gas at the present time still subject to permit issued by the Province of Ontario.

Presiding Examiner: Read that answer, Mr. Reporter.

(Answer read.)

By Mr. May:

Q. I wish you would clear that up for us. I am not clear as to just what kind of a permit was issued. A. At the present time in the Province of Ontario all

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natural gas sold to industrial users is subject to the issuance of a permit by the Province of Ontario under the Fuel Board Act, which means that each industrial customer, before he can obtain any industrial gas for any purpose, must have a permit from the government for the use of that gas.

That is the way in which the Province can control the volume of gas being sold for industrial purposes. In turn, if there is a shortage that develops in the Province in the natural gas area, industry is subject to curtailment first.

Q. That is true in this country. A. Yes. That is the reason for the permit, so the government knows at all times the maximum amount of gas that can be sold industrially, and to whom that gas can be sold in each case.

Q. To use an analogy, it is like getting a certificate from the Federal Power Commission to serve an industrial customer—if you are qualified to answer that. A. I am not familiar with the procedure.

Q. In your estimates you provided for a gradual increase in this interruptible industrial category as we have gone over the figures, and you also have shown progressive increases in the volumes to be sold for firm industrial purposes, have you not? A. Yes, sir.

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Q. Substantial increases, would you call them? A. They are based on the growth we have had in the area over the past several years. The volume has been increasing. Our industrial sales have been increasing, not in a straight line of increase; but they have been trending upwards over the past several years. We anticipate that that same condition will exist in the future as new industry moves in. As the population of the area increases, bringing in more

industry, there will be a greater demand for natural gas for industrial purposes, processing gas.

So in our future estimates we have contemplated that that situation will continue.

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Q. Do I understand correctly that these cities of course do not now have natural gas? A. No, sir.

Q. Do they have any type of gas? A. Yes, sir. The Cities of Kitchener and Waterloo now have manufactured gas. The City of Guelph has manufactured gas. The City of Stratford at the present time does not have any type of gas. They had manufactured gas up to approximately two years ago, and they discontinued the service of gas in

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the City of Stratford when the costs got too great for them to manufacture gas to stay in business.

The Town of St. Marys does not have any gas service at all.

Q. In all of these towns you have included a firm industrial load, have you not? A. Yes, sir.

Q. Have you included any interruptible industrial load in these towns? A. No sir.

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Frederick R. Palin

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Cross-examination (Resumed)

By Mr. Flax:

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Q. From your knowledge of the area of the Ontario Natural customer companies other than Union of Canada, would you say that in those areas there are places where

interruptible gas can be sold? A. In most of those markets, I believe that is right, yes, there would be.

Q. So would you say it is possible that among the customers who purchase gas on a firm basis and wholly on a firm basis from Ontario Natural, that such customers may fill in

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their valleys by the sale of interruptible gas? A. In this operation it is proposed that all of these customers of the Storage Company will buy their entire requirements from Storage Company. The volumes shown on Page 2 of Schedule 14 are their estimated annual requirements to meet the firm market. So if they contract for those annual volumes of gas on a demand-commodity basis, they will have no gas available to be sold on an interruptible basis.

In other words, none of these customers would have any of the gas available that is shown on Page 2 as firm gas requirements—none of that would be available for sale on an interruptible basis, because they will contract for an annual volume.

Q. Won't they contract for a peak day volume? A. There will be a peak day volume assumed at the start of the project. Then as their firm requirements increase, and that increases the demand, then the demand rate—the rate itself will not change but will be applied to a higher demand.

So on that basis, none of this gas is available for sale by the customers of Ontario Pipeline Company on an interruptible basis.

Q. You mean that the customers, even though they are paying a demand commodity rate, will not be permitted to fill in their valleys?

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A. What I am attempting to say is this: If the customers contract for these annual volumes of gas as shown on this

schedule, they will have no gas available from that source for interruptible sales. They will require that to meet the firm load on the market throughout the year. They, of course, will be buying more in the winter than in the summer, but if they fill in the valleys in the summer on an interruptible basis, then they have used up part of their required volume of firm gas for the winter, so they can't do that.

Q. Mr. Palin, what is to keep the purchasing company from estimating their annual requirements on a firm basis so high that they will be able to spread that gas out throughout the year on 100 percent load factor and fill in their valleys with the sale of interruptible gas, with the sale of firm gas on an interruptible basis? A. I think the answer to that is, if I may repeat: It was anticipated that these contracts will require the customers to get 100 percent of their gas requirements from the pipeline company, from the Natural Gas Storage Company. If they wanted to contract for enough gas that they could operate very close to say 100 percent load factor basis, it would require so much gas through the summer that the gas wouldn't be available to them.

Ontario Storage won't have the gas available to them. For instance, if they established a peak of say 20 million in the

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winter, and ran on throughout the year on that basis to get close to 100 percent load factor, the Storage Company would not have the volume of gas to meet that.

Q. Then have you examined their requirements to be assured that they haven't included interruptible gas in their purchase under a firm basis? A. Actually the surveys of these markets, the estimated requirements of those markets, were completed by the Union Gas Company and Ontario Natural Gas Storage Company based on our

knowledge of the requirements in the surrounding market, and we know that there is no interruptible provided for.

Q. Is each customer permitted to take up to its peak day contract demand in any day during the year? A. Yes, sir, it would be. Any day during the year it could take up to its peak contract demand.

Q. You say then that the only way they could do that would be to endanger themselves in going beyond their annual volume requirements? A. Yes, sir, if they did it too frequently, they would obviously go beyond their annual volume requirements.

Q. Referring to your Exhibit 61, on Schedule L you show Union Gas of Canada as having 11 customers on an interruptible industrial basis. A. Yes, sir.

Q. Could you name those 11 customers and the use made of gas by them? A. Just referring to a working sheet that was used in the preparation of this Schedule L, one of the customers indicated is Dominion Glass Company, Ltd., a glass manufacturer. Another one is Greenmelk Company, Ltd. Another one is Dow Chemical Company.

Mr. May: Excuse me. I think Mr. Flax has asked for use to which the gas was put.

The Witness: All of these requirements are—well, Dominion Glass Company is a glass manufacturer. Gas is required in certain of their operations in which bunker C oil is now used, in the directing processing. None of these customers I am mentioning have anything to do with boiler fuel or anything of that nature. It is direct processing gas in the glass manufacture.

Greenmelk Company is a food processing Company. Dow Chemical Company, as the name indicates, is a chemical plant. Polymer Corporation, which is a synthetic rubber plant. Fiber Glass of Canada uses oil and gas in the

processing of its products. Cabot Carbon Company, which is a chemical plant at Sarnia.

By Mr. Flax:

Q. Do they make carbon black with this gas? A. I don't think that the quantity that is shown here

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for that particular customer—it is a process that they are now using bunker B, industrial oil, for. With the 11 customers adding up to a billion, it is obvious that no one of them is a large consumer. I might mention that the Dominion Glass Company, the estimate for them was approximately half a billion, that one company.

The other ten, it is quite obvious that it is just small processes, not their entire process that they require it for. Another one is General Steel Wires, who manufacture home appliances, enamel products, using bunker B oil: General Motors Diesel Corporation, Proto Tool Company. I believe that adds up to 11 customers.

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Redirect examination

By Mr. Burling:

Q. Mr. Palin, what in general is the policy of the Union Gas Company with respect to the sale of gas for boiler fuel? A. We do not permit it. We have no sales of gas for boiler fuel.

Q. Why has the company adopted that policy? A. There are two governing facts I can think of at the moment. The Province, I don't think, would issue a permit for the use of gas for boiler fuel, and the rates are such that it would be out of all competition with other types of fuel available.

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853

Charles S. Evans

was called as a witness; having been first duly sworn, was examined and testified as follows:

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Q. Dr. Evans, on the basis of present reserves and the past drilling experience, and what you know about the area generally, what is your opinion of the possibility of finding enough gas in Ontario to supply Hamilton and the other communities for which natural gas service is proposed in this proceeding? A. You are asking for my opinion? In my opinion it is utterly impossible to find that much gas.

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Thomas Pinckard

was called as a witness, and after having been duly sworn by the Presiding Examiner, was examined and testified as follows:

Direct examination

By Mr. Burling:

Q. Will you state your name, please? A. Thomas Pinckard?

Q. What is your address, Mr. Pinckard? A. 280 Bay Street, South, Hamilton, Ontario.

Q. Are you employed by United Fuel Investments? A. I am.

Q. What is your position with that company? A. General manager.

Q. How many years have you been general manager? A. 22.

Q. Will you describe briefly what you general experience has been in the public utility business? A. Over the past 42 years I have been either president, vice president, or general manager of gas, electric, transportation and engineering companies.

Q. Will you describe the corporate setup of United Fuel Investments? A. United Fuel Investments is a holding company owning all of the capital stock of the Hamilton By-Product Coke

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Ovens, Limited; the United Gas and Fuel Company, Limited; the Wentworth Gas Company, Limited; and the United Suburban Gas Company, Limited.

Q. Those four are still distributing gas companies? A. The three gas companies with the name "gas" in their corporate title are distributing gas companies, and the coke company is not.

Q. What business is it engaged in? A. It is engaged in the business of manufacturing gas from coke and all of the products that come from the By-Product Coke Ovens in the distillation of coal.

Q. Will you now describe briefly the history of United Fuel Investments and its subsidiaries in the gas distribution business? A. Gas was first brought to the City of Hamilton about the year 1950. Manufactured gas was distributed until about the year 1902, when there became available——

Q. Excuse me; you said 1950. Did you mean that? A. 1850, excuse me. In 1850 manufactured gas came to the City of Hamilton, and it was distributed as manufactured gas until about the year 1902, at which time there became available an adequate supply of natural gas from sources wholly within Ontario.

At that time, 1902, the distribution of manufactured gas was discontinued and the distribution of natural gas was

begun. After a period of about fifteen years, natural gas from time to time became seriously short in supply.

The Natural Gas Conservation Act of Ontario was passed in 1918, because of the shortage of the supply of natural gas, and in an endeavor to conserve the remaining supplies of natural gas from sources in Ontario. In order to obtain sufficient additional gas to supply the requirements of our customers, we formed the Hamilton By-Product Coke Ovens, Limited. That company erected in the year 1924 and enlarged in the year 1926 a complete by-product coke oven plant consisting essentially of sixty ovens.

With a supply of gas from those ovens, the United Gas and Fuel Company then began the distribution of manufactured gas in a large part of the area of the City of Hamilton, and continued to distribute natural gas in a small part of the area of Hamilton.

Natural gas became so short in supply that its distribution was entirely discontinued in the year 1947, and manufactured gas was distributed through all of our mains, beginning at about that time.

That is the situation as it exists today.

Q. What is the number of customers, if you know, now being served by United Fuel and its subsidiaries? A. Slightly over 40,000.

Mr. May: Is that system-wide figures, Mr. Burling?

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The Witness: System-wide; the three gas companies.

By Mr. Burling:

Q. Approximately how many miles of gas mains? A. slightly over 800.

Q. That is a system-wide figure also? A. System-wide.

Q. Will you now describe briefly the production facilities operated by your company, with particular emphasis on the condition of them? A. The gas production facilities of the Hamilton By-Product Coke Ovens, which operates the sixty by-product coke ovens—from those ovens is produced per 24 hours about 6 million salable cubic feet of 550 Btu gas. The ovens have a capacity to deliver per 24 hours about 10 million cubic feet of gas if means can be found—and occasionally means have been found—to under-fire the ovens with gas from some external sources. Normally, because of the difficulty of obtaining sufficient gas from external sources to under-fire the ovens, they produce per 24 hours that 6 million cubic feet of gas. That company owns and operates an oil gas set, having a capacity to manufacture per 24 hours about 6 million cubic feet of 530 Btu gas. But because of the gravity of that gas, we cannot mix more than about 2 million cubic feet per 24 hours with the coke oven gas.

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That company—the coke company—has storage facilities and other equipment for the use of 220,000 Imperial gallons of propane-butane, and uses the gas therefrom upon various emergency requirements for gas. That is the extent of the gas manufacturing production facilities of the Hamilton By-Product Coke Oven Company.

Q. Will you now tell us approximately how old the by-product coke ovens are? A. Twenty-five ovens were built in 1924. Thirty-five ovens were built in 1926. They have been operated continuously since those dates to the present date and are now operating.

Q. On the basis of your own experience, what would you say is the average life of a by-product coke oven? A. People who operate ovens at about the speed that we operate our ovens—meaning the number of times a day that the ovens are charged with coal and the coke pushed out from

those ovens—their experience where they are financially able to do so is that those ovens are replaced anywhere from every 22 to 25 years.

Putting it in another term, our ovens, this age of thirty years for one group and twenty-eight years for another group, is very old for coke ovens.

Q. Why don't you replace them, then, Mr. Pinckard? A. One reason is that of course—and of the greatest importance perhaps—the market for domestic coke is so small

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that we can't, in order to have sufficient gas to take care of the requirements of our related gas companies, push out the quantity of coke per day or annually to produce the quantity of gas that we need per day or annually if we are not going to be able to sell, dispose of, at reasonably proper prices the coke that we produce in connection therewith.

Q. In addition to the coke oven gas, do you purchase any additional gas from outside sources? A. We do. Hamilton is a heavy metal industry community, and there are steel plants there having blast furnaces and coke ovens making their own coke for use under those blast furnaces. In connection with those operations they make gas, of which they have some excess supply; and we are able to make some reasonably short-term contracts with one of those companies for coke oven gas equivalent to our own coke oven gas.

Q. Has your company had any engineering survey made to determine the desirability of rebuilding or replacing the coke ovens? A. When our ovens began to approach the end of the life experience that other people had had, and that we knew about from various sources, we began to employ the services of coke oven constructing firms—Koppers and Semet Solvay and Wilput—to have members of their staff examine the physical condition of our plant.

We did that in every year and have done it in order to

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keep a record of the physical condition of our ovens, so that we wouldn't suddenly wake up and find that they were falling down on us.

Q. Did they give you any estimated cost of a replacement program? A. Yes. Of course we have tried to keep in touch with that figure, too. In recent years it has been increasing very rapidly, and somewhere now in connection with ovens alone—although there are other features of our plant that are just as old that were built and put in at the time, but which are auxiliary to the coke ovens, but which were put in at that time, so there would be money required to be spent there, too—but there is somewhere in the neighborhood of $2 million that would be required to replace those ovens.

Their estimate of the remaining life of those ovens, how many more years they might be serviceable, is that they would last approximately three more years with careful attention or just a few years.

Q. In addition to the facilities you have been describing, does your company have a gas holder? A. We have a 5 million cubic foot wet-type holder.

Q. What is the condition of that holder? A. As our plant has grown older with respect to all other physical appurtenances of our business, we have given consideration as to when those items, too, might require replacement.

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So over several of the recent years we have had people like Stacy Brothers and others come and professionally examine the condition of that equipment and the holder is one such item.

Because they themselves thought that it ought soon to be taken out of service—at one time they thought it ought soon to be taken out of service—they thought a more ex-

tensive examination should be made than just from the outside, where all of the deterioration, whatever it was, could not be observed. So they removed, I would say, upwards of 100 blanks, steel blanks, which they cut out from the steel of which the holder is composed in order to examine the inside and determine the extent of corrosion and so forth.

Do you wish me to report upon the condifions found?

Q. Yes, sir. A. On the north side, shielded away from the sun, the sheets had become very thin through corrosion, thin to the point that there is great uneasiness even as I sit here now as to whether or not there will be a failure. However, we have done the things that they recommended that we do in the way of strengthening and what not. So, at any rate, the holder is still being operated.

There isn't any such negligence in the sense that at the moment we are not doing anything that we are liable to cause injury to somebody else. We would be the ones that would suffer in the main sense. As a matter of fact, these people

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have said, "Well, you don't need to worry to that extent." It is only the natural worry that a manager of a business has.

Q. Could the repairs which you would like to have made to the holder be made while the holder was being used in service? A. It is impossible to do that. We have been informed by these engineers that we would have to take that holder out of service to accomplish the repairs that would be required internally. If that should happen, we would then need to erect another holder; and inasmuch as this holder is of sufficient capacity for the storage of our manufactured gas, should we have to construct another holder—whatever its size may be—should we repair this large holder, it would be eventually a useless appendage to our business.

Q. Your company has no need for two holders? A. No need for two holders.

Q. Have you any estimate of what it would cost to build another holder? A. Again that has varied as time has moved forward. We have had various estimates made from time to time by competent people. It appears that the present holder would cost somewhere in the neighborhood of a million dollars—that is, to replace a 5 million cubic foot holder would cost somewhere in the neighborhood of a million dollars.

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That isn't a firm prposal that anybody has made us. It is simply the verbal kind of suggestion as to what it might cost us.

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Q. What is the approximate population of your franchise area? A. At the present moment about 325,000. In these

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population figures we must remember in any questions that are asked about them, the Dominion of Canada does not take a census at frequent intervals in the same manner in which a census is taken here. So those figures very often have to be obtained from something like assessment departments of various governmental offices.

So these figures of which I speak, however, are taken from whatever those sources are and how reliable they are, I can't assure anybody. But we who have been there a long time have heard various public officials talk about this sort of thing; and we have read various governmental documents, and it is reasonable to assume that we have 325,000 people in our franchise area.

Q. Would you say that it is a growing area, or more or less static in population? A. To us who live there we

think it is an astounding growth that has occurred. The population of Hamilton perhaps was slightly over 150,000 when I went there—maybe 175,000, again that uncertain figure; and it is said to be in the neighborhood now, the metropolitan area, of about 225,000.

So that same kind of a growth in general terms, percentagewise, at any rate, is taking place in all the other communities that we serve.

Oakville is a very large town lying almost half-way between Hamilton and Toronto, and in that area there the Ford Motor

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Company has recently built and has begun operation of a very large automobile plant—one of their additional plants—which employs 1500 or so employees. The residence area there has increased in that proportion. Those people came in from the outside.

Q. I take it from what you say that it is a manufacturing area? A. It is a very great manufacturing area. It is as perhaps an important manufacturing area as there is in the Dominion of Canada.

Q. What type of manufactures take place there? A. In Hamilton itself it is a heavy-metal working community. You may already know that a very great many of the war munitions of a heavy-steel nature were made there some under contracts for the United States Government.

Our whole franchise area doesn't consist only of heavy-metal industries. There are drug firms and paper firms and domestic appliance firms.

Q. Is your company—and by that I mean your whole system—now able fully to take care of its present customers? A. We are not.

Q. Why is that? A. One reason why not is because the gas cost of manufacture is so great even by the cheapest method that we

know—that is, to make it out of coal and by-product coke ovens—that we cannot sell it at rates that will get us the business.

Another factor is that the high cost of extending mains now to serve a base load which is cooking and/or heating—the ordinary simple domestic uses—the cost of extending to reach them is so great that we can't recover the cost of our money within a reasonable time so that we don't earn anything on it.

To get a larger share of the domestic business, heating, our manufactured gas rate cannot compare so as to permit us to take on a heating load in competition with oil or any other fuel that is there.

Q. Do your mains now cover and provide service throughout your franchise area? A. They do not. These new areas that have been added throughout our whole area, in which new houses and new factories have been built, are not served. We have not extended our mains to serve them.

It just occurs to me that you have asked a question that I could have enlarged upon. Why do we not extend our gas mains? Why have we not served these people? Why have we not enlarged or rebuilt our coke ovens and the rest of our plant in order to have gas enough with which to do that?

As soon as we began to believe that there was some

possibility of our obtaining natural gas, we certainly couldn't proceed to make any plans to enlarge our manufactured gas plant if natural gas was some day within reasonable years going to be available to us.

Q. In the event you are able to obtain the gas which you contemplate obtaining from Union or from the Ontario

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Storage Company, would your company propose to extend its facilities and increase its service so as to cover all people who would like gas service within the franchise area? A. We intend to do that. We intend to enlarge our whole main service so as to serve all of these unserved areas that I have described.

Q. Have you made any survey to see whether the people in these areas not now served would like to buy gas if it were made available to them? A. We have, in order to determine the fact as to whether it might be worth our doing that thing, and as to what might be the cost of our doing that thing. We have made such surveys.

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Q. Is there any other available source of natural gas insofar as you know that might be utilized by your company to supply the needs of Hamilton? A. As of the moment there is none from any source; but in addition to our negotiations with the Union Gas Company we have been negotiating with the Trans-Canada Pipe Lines for Alberta gas, when and if it comes. We have also discussed with the Consumers Gas Company of Toronto, who has some interest or what not in the line that operates presently from Niagara Falls in New York, crossing the Niagara River.

Q. Is that the line— A. Crossing the Niagara River and goes to Consumers Gas Company, skirting Hamilton. We have inquired as to the possibility of our getting gas out of that.

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Q. What has been the result of those talks? A. The last conversation that we held was as recent as last December 21. If the fellow who owns that horse won't take it out of the stable and let us take a look at it, I don't

know whether we can buy it or not. But that is about where it is.

Q. I would like to know a little bit more about— A. About the horse?

Q. Yes, sir. A. We know by actual conversation with the management of the Consumers Gas Company of Toronto that as of the time that they were arranging to obtain this gas from the United States through the Tennessee Gas Transmission Company in the United States, I believe, they together were intending to build a transmission line from the Niagara River to Toronto, that they then said—volunteered, because we wondered whether we couldn't get gas from that source—that there would not be sufficient gas available in that line at all times for them to serve their own needs.

I believe at one time they even remarked that when their load had within a very few years built up as they intended to build it up, that they would be having to make for peak service about 20 percent of all of the gas that they would distribute.

We can not take a gas, having a franchise obligation to fulfill, we can not mix the two gases—natural and manufactured,

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I think that is within reason we can't—and we can't take such a small quantity of natural gas at the moment as might serve our own needs unless we are going to get that gas, and we certainly can't expand with it, unless we are going to get that gas over a period of time and until we can obtain an assured sufficient supply of natural gas.

So Consumers Gas Company have not yet in any of these conversations, even in the slightest degree, intimated, let alone promised, that they would have gas enough for us so that we could have a dependable supply for a period of time that might give us reason to believe that by the

end of that time we would have even Alberta Gas from Alberta or from the United States from other sources.

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Q. In conclusion, Mr. Pinckard—this is the last question I am going to have for you—would you summarize your reasons for wanting to obtain a natural gas supply for Hamilton?

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A. I would think that the major obligation that is upon us now as a public utility is the people whom we serve. That is our first obligation and must be, if we are going to maintain peace and harmony where we are dependent upon the voters as to our right to exist in their community, and with the threat that other fuels are becoming available that appeal to the public so much, we have got to do something to get away from high-priced, high-cost gas.

As to our coke company, we can't proceed in that direction because we have lost our coke business for domestic purposes substantially. By way of illustration, we for years, many years, sold all of the coke that we manufactured—270,000 tons a year—for domestic heating use. We don't sell today for domestic heating use, despite all the sales effort that we can give it, 20,000 tons for domestic heating use.

If we hadn't found a way to obtain foundry business, manufacture foundry coke, of which in our whole market areas there is only about 60,000 tons that could be sold, and we have to share that to some extent with other coke manufacturers, some in the United States—and if we hadn't available to us in Canada within a reasonable freight rate distance of us—for instance, the American Cyanimide Company, at Niagara Falls, Ontario, who use coke in a process for the carbon that is in the coke and not as a heating

medium—if we hadn't found that business, and if we can't keep that business, we are

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going to be ruined. That is the long and the short of it.

So we are forced to do the thing of trying to find a source of supply of gas of some other kind—if we are going to keep in the gas business—some other kind of gas. We have employed engineers to advise with us with respect to that. Where can we get other supplies of gas that can be sold at prices that will be able to hold our business for us. There is no hope in that direction.

The cost of coal has constantly been rising. It has increased approximately 75 percent in the past several years, whereas the best that we can do to increase our coke price—and that isn't from domestic sales, that is from these other sales—is somewhere in the neighborhood of about 60 percent.

It is constantly that we are going backward in all directions.

With our reduction in our production of coke—because today we are operating on a production capacity where we used to carbonize 400,000 tons of coal a year in those coke ovens, where we are today carbonizing about 250,000 tons of coal a year—and with that reduction in the quantity of coal we are carbonizing some reductions in the productions of tar, toluol, benjol, and ammonia, and so forth. So we are beginning to be closed in on all sides, and we have got to find some outlet somewhere.

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I would say furthermore—I don't know whether it is appropriate to this hearing or not, but it is a thought that occurs to me because I felt so keenly about it so many times—that we have in our whole area, Hamilton and surrounding areas, a very great number of American branch

plants there. Those people send over to those plants and have sent over to those plants from time to time people who come and originate from their plants in the United States.

They are familiar with the situation in the United States regarding this wide distribution of natural gas throughout all—Goodness knows what, all the area. They bring into our area gossip or information about it and so forth.

So our people, generally the Canadians who may never have lived in the United States and know all of that, they wonder why it is that, my goodness, with all of that gas being distributed——

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919

S. Leslie Parker

was called as a witness, and after having been duly sworn, was examined and testified as follows:

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Direct examination by Mr. Burling:

Q. Will you state your full name, please, Mr. Parker? A. S. Leslie Parker, 18 Ashford Boulevard, Hamilton, Ontario.

Q. Are you connected with the municipal government of the City of Hamilton? A. Yes, sir.

Q. In what capacity, please? A. Comptroller of that city. That is an elected office, by the way.

Q. Are you a member of the Hamilton City Council? A. I am.

Q. Are you also a member of the Board of Control? A. Yes, sir.

Q. What is the relation of the Board of Control to the City Council? A. In Hamilton we have a council composed of 21 members. Sixteen of those members are elected in wards—in other words, in divisions. Four members of

the Board of Control are elected at large by the whole of the people along with the Mayor.

The Board of Control more or less acts in executive direction to the City Council. Everything that the Council approves or disapproves first goes through the Board of

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Control for their study and recommendation.

Mr. Burling: Mr. Examiner, I would now like to have marked for identification a single sheet entitled, "Extract From the Minutes of the Hamilton City Council as Adopted November 30, 1954."

Presiding Examiner: Exhibit 63 for identification.

(The document above referred to was marked for identification as Exhibit No. 63.)

By Mr. Burling:

Q. Mr. Parker, do you recognize this Exhibit 63 for identification? A. I do. It was a recommendation of the Board of Control to the City Council.

Q. Can you tell me whether this is a true copy? A. This is a true copy of the recommendation that went to the Council and is now in the minutes of the Corporation of the City of Hamilton on record.

Q. Will you please state under what circumstances this action was taken? A. I think it is generally known that we in Hamilton are in a very desperate situation with regard to the question of gas, whether it be any type of gas. We have some many years ago granted to the United Gas and Fuel Company a franchise for the supply of gas in the City of Hamilton. I think as Mr. Pinckard stated, in 1947 we had natural gas, and

922

that franchise was granted, particularly for domestic use, for whatever quantity of natural gas that they had. It was predicated that so much should go to the domestic user, who is now entirely cut off.

May I say I noticed you asked the question of Mr. Pinckard that if natural gas was permitted in Hamilton from the United States, had they made a survey of the area and could it be used and would the people of Hamilton use natural gas if they could get it for heating and domestic purposes.

Q. Yes, sir. A. I want to say this, and quite frankly I think you will all realize here, for whatever merit it has—and I hope it will be considered by yourself, sir, and the Commission—that they didn't just send me down here to testify as to this, because that would have been unnecessary.

We in Hamilton in new areas—and not only new areas, but in certain portions of the city—for the last few years have certainly been bothered by people requesting what United Gas and Fuel was doing with regard to getting a supply of gas for use. In fact, only within the last few months we have had letters of criticism from the paper and also even by the paper itself that United Gas and Fuel Company was not living up to the franchise. In other words, that they were not trying to get gas—which of course is the uninformed public.

I think the Council sent me down here more or less

representing the domestic user to see if it is possible that we can get gas, because I have been a member of the Council for ten years and have had a lot of experience; and they have sent me down more or less to see if I can enjoin with this application to answer any questions about the municipality.

Q. You referred two or three time to getting a supply of gas for the City of Hamilton. By that do you mean a supply of natural gas? A. Naturally, because I think Mr. Pinckard said it was impossible to produce manufactured gas at an economic price. I think the people of Hamilton

are pretty perturbed because we are in a desperate situation in regard to hearing with gas for domestic use. We have none, practically.

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933

Frederick R. Palin

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Mr. Jerome J. McGrath: You don't have a flat interruptible rate then, at the present time, or proposed?

The Witness: No, sir, we don't propose a flat interruptible rate at this time. That would depend on the circumstances when the gas was made available to the customer.

. . . . . .

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Mr. Jerome J. McGrath: I would like to go back just for a minute to that industrial interruptible rate. Do you have at the present time any proposed minimum rate that you would apply to the interruptible customer?

The Witness: No, sir. We have not worked out an actual rate for that. As mentioned, whatever rate is developed would be taken on an individual basis.

Mr. Jerome J. McGrath: A negotiated rate?

The Witness: A negotiated rate.

. . . . . .

955

Cross-examination by Mr. May:

Q. Mr. Palin, as I understand it, you in the preparation of these exhibits assumed a conversion to straight natural gas in Hamilten and the other communities. Is that correct? A. Yes, sir, through the United Fuel Investments, Limited, consolidated system as shown here.

Q. Straight natural gas was your assumption? A. Yes, sir.

Q. I understand that in the City of Hamilton you have manufactured gas, of course, coke oven plants, and your holder. Is it proposed to use any of those facilities for peak shaving purposes, for example? A. No, sir.

Q. You are going to retire those facilities completely? Is that correct? A. That is the project, yes.

Q. And none of those facilities will be used for standby or peak shaving purposes? A. It isn't our present intention to retain any of those for that purpose.

Q. Those facilities could be used for peak shaving purposes, could they not? I mean, it is physically possible if they were retained?

956

A. I don't think the coke ovens could be. The nature of the operation of the coke ovens would preclude them being used for peak shaving purposes. In other words, it takes several days to start them up, several days to cool them down; and I don't see how they could be used for peak shaving purposes to meet peaks on short notice.

Q. You mean you couldn't mix it with natural gas? A. Once the coke ovens start, they have got to be kept in operation at all times, winter, summer, days of peak demand, as well as other days.

Q. Couldn't your coke oven plants be used to fill your holder and use the gas in the holder for peak shaving purposes? A. The holder is only equivalent to 2500 Mcf of gas.

. . . . . .

975

By Mr. Flax:

Q. If a customer found toward the end of the year, and he commenced his service during the middle of the summer, let's say—if he found at the end of the year that

he hadn't taken up to his annual volumes, it would then be possible for him to dump gas up to his annual volumes without increasing his contract demand, would it not? A. That could be possible, provided he didn't go through the contract demand.

977

Q. You referred to the fact that your interruptible would disappear in; I believe you said, five years. A. I believe I said somewhere around the sixth or seventh year, or two years after the fifth year shown here.

Q. Would their disappearance to any extent be the result of the firming up of such interruptible customers, or would you just discontinue service? A. We would anticipate that that volume of interruptible gas provided for in Schedule E would be required to meet primarily increased residential requirements. As a result, the company would have no interruptible gas available for sale.

Q. Have you fixed any sort of rate for your interruptible industrial, or is that that rate that is to be negotiated? A. That is the rate to be negotiated.

1403

M. M. Farley

was recalled as a witness.

Cross-examination by Mr. Shannon:

1416

Q. I notice that while you show a rate for your I-1, I-2 and I-3 rate schedule on Schedule 2 of Exhibit 80, you

1417

do not show any rates or revenues to be made under those I schedules on Schedule 1 of Exhibit 80. A. That is correct, I have not.

Q. Are we to conclude from that that Panhandle does not propose to make any sales under those I schedules? A. I don't know whether they propose making any sales or not.

Q. Do you know what their plans are with respect to the future? A. No, sir.

Q. Were you instructed, Mr. Farley, to prepare this exhibit, this estimate of your annual sales and revenues, on the basis that you would not be making any sales under the I schedules? A. I received no instruction with respect to that.

Q. Was it your decision to omit the I schedule sales? A. As far as preparing this exhibit was concerned, I assumed there would be no I schedules sales.

. . . . . .

1433

By Mr. Flax:

Q. Mr. Farley, if you recall, in the application in these proceedings Panhandle proposed to obtain approximately 155 million cubic feet per day on a 100 percent load factor basis from the increased compressor capacity on its system. Is that correct? A. I believe that is what they have in their application, yes, sir.

Q. When you first put in this Exhibit 27, at that time it was intended that the 155 million cubic feet per day, at a 100 percent load factor, would not be available because

1434

of the fact that Panhandle had decided not to proceed with that portion of the case. Is that correct? A. I don't know when that was decided. I am not familiar with it.

Q. Exhibit 27 is predicated on that volume, or a similar volume being available to Panhandle, is it not? A. Exhibit 27 is predicated upon an estimate of the customers' requirements.

Q. Exhibit 27 is not what Panhandle was willing to serve

the customers, then? A. Not at this time. We won't have that much available.

Q. At the time Exhibit No. 27 was prepared, it was what Panhandle was willing to serve its customers, was it not? A. You are talking about the contract demands in Exhibit 27, annual volumes?

Q. I am talking about the contract demands in Exhibit 27, included the volumes that Panhandle was willing to contract and serve its customers. Is that correct. A. That is my understanding, at that time.

Q. And that there has been a change to the effect that Panhandle either is not willing to, or cannot, serve the volumes shown on Exhibit 27 at this present time. Is that correct?

1435

A. I think there has been that change, yes, sir.

Q. Generally that change is the result of the withdrawal of the portion of the application which contemplated the increase in compressor capacity and the sale of 155 million cubic feet per day therefrom. Is that correct?

Mr. Miller: Mr. Examiner, I don't want to be super-technical, but I do object to the use of the word "withdrawal." We haven't actually withdrawn any part of our application. We have indicated a postponement or deferment of that part of the application.

Presiding Examiner: Would you care to reframe your question with that qualification? It does seem to assume a fact not in evidence.

Mr. Flax: All right, sir. I will take Mr. Miller's word of "postponement" or "deferrment" of that portion of the application. With that change, I wonder if the reporter could read the question, please?

Presiding Examiner: Will you read it, Mr. Reporter?

(Question read.)

A. I think that is correct.

1443

Q. Then if the various abandonment cases that are now pending are decided adverse to Panhandle's position, and if Panhandle was required to serve the volumes that the Commission has previously fixed for those customers, then Panhandle would not be able to meet its contract and

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assigned demand obligations with its presently proposed capacity. Is that correct? A. That's correct.

* * * * * * * * * *

2270

Dr. Frances Gaw

was called as a witness and, after being first duly sworn, was examined and testified as follows:

Direct examination

By Mr. Woods:

Q. Would you state your name, please? A. Dr. Frances Gaw.

Q. Where do you live? A. 4809 Roanoke Parkway, Kansas City, Missouri.

Q. With whom are you associated at the present time? A. I am Senior Research Analyst for the City of Kansas

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City, Missouri, the City Plan Commission.

Q. Would you state for the record, please, your education and any degrees that you hold? A. I have a Bachelor's degree, Washburn College, in Topeka, Kansas, and following that, I took graduate work at Harvard Graduate School, and the University of Edinburgh in Scotland, and then obtained a Ph.D. degree at the London School of Economics, which is part of the University of London.

Q. What type of work do you do principally for the City of Kansas City, Missouri, in your present position? A. I do analyses and studies of the four-county metropolitan area as determined by the Census Bureau, four-county population, industry, and general analysis of the metropolitan problems.

Q. For how long have you been engaged in such work? A. Eleven years with the City Plan Commission.

Q. In the course of your work with the City Plan Commission of Kansas City, Missouri, have you made population studies and population forecasts for the metropolitan Kansas City area? A. Yes, I have, several times.

Q. Incidentally, what comprises the metropolitan Kansas City area, if you please? A. The Census Bureau determines that for all the large

cities in the country, and for Kansas City, it is four complete counties, Clay and Jackson in Missouri, and Wyandotte and Johnson in Kansas.

Q. That is what is embraced within the term "metropolitan Kansas City"? A. What is embraced within that term for the present. We anticipate something else in our forecasts for the future.

Q. Would you explain what is done in making a population forecast? A. There are four different basic methods that are recognized by the Census Bureau and by other population experts. We consider the Census Bureau the No. 1 authority.

We have made our forecast according to one of those four, which is called the ratio method. By that method, we study the trend 50 years back to 1900—55 years—and compare our population with that of the United States.

We compare the trend between what we have in population with what the United States has according to the

record of the Census Bureau. Then we used the same method in forecasting.

The Census Bureau has made a forecast up to 1975 for the United States, and we use the same method of relating our forecast to the forecast for the whole nation.

Q. You have made a forecast for the population of metropolitan Kansas City?

2273

A. Yes.

Q. Through what years? A. Through 1970, and one of them through 1980. The figures given here are through 1970.

Q. That includes Clay County, Missouri? A. Yes, it does.

Mr. Woods: If the Examiner please, I would like to request that an exhibit number be assigned to this document for identification.

Presiding Examiner: Will you describe what the document is?

Mr. Woods: The document is a schedule showing the population of the Kansas City metropolitan area, the four counties of Clay and Jackson in Missouri, Wyandotte and Johnson in Kansas.

Presiding Examiner: It is a sheet entitled "Table 1, Population, Kansas City Metropolitan Area, Four Counties, 1940-1950"?

Mr. Woods: That is correct, your Honor.

Presiding Examiner: Do you desire the sheet marked for identification?

Mr. Woods: I would like to have it given a number for identification, if your Honor please.

Presiding Examiner: Exhibit No. 109 for identification.

(The Document above referred to was marked for

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identification as Exhibit No. 109.)

By Mr. Woods:

Q. Directing your attention, Dr. Gaw, to what has been marked as Exhibit No. 109 for identification, will you please state what that document shows? A. That document shows the growth in each of the four counties separately, and in the metropolitan area as a whole between 1940 and 1950, based on Census Bureau records. It also shows a growth in the United States, as a whole, between that period and indicates that the growth in Clay County was 48.7 percent——

Mr. John A. McGrath: Mr. Examiner, I wonder if we might wait until the exhibit has been distributed?

I wonder if we might have that read back, please, Mr. Examiner.

Presiding Examiner: Read it, Mr. Reporter; the last answer.

(The question and answer were read by the reported.)

By Mr. Woods:

Q. Would you continue with your answer, please?

Mr. Littman: Mr. Examiner, I am going to object to any further testimony regarding Exhibit No. 109 unless it is related in some way to the specific territory served by Central West Utility Company. Obviously, they don't serve, as we all know, the Kansas City metropolitan area, nor does it

2275

serve all of Clay County. There are numerous parts of Clay County, as I understand it, that are served by a company called the Gas Service Company.

Unless this is related in some way to this particular intervenor, it is wholly meaningless, it seems to me.

Presiding Examiner: Mr. Seacat, what is the purpose of

the exhibit and the testimony related thereto other than as to a portion of Clay County, Missouri?

Mr. Seacat: I yield to Mr. Woods on that.

Presiding Examiner: Mr. Woods, I am sorry.

Mr. Woods: If your Honor please, in answer to your question, it relates directly to the Clay County, Missouri, and in our opinion, and for the purpose for which we are offering the statistics as to the other counties in metropolitan Kansas City is that the growth of the Clay County area, and particularly that certificated to Central West, is directly related to and cannot be considered separately and apart from the growth possibilities of the metropolitan Kansas City area.

There is a definite connection, and we will establish that by our testimony between those things. That is the reason, your Honor, I am offering the exhibit. In answer to Mr. Littman's question, of course, I intend to tie it in directly to the territory certificated to Central West.

Presiding Examiner: The objection is overruled. It may

be that the testimony will be subject to a motion to strike at a later point.

Mr. Seacat: In the cause of expediting, does Mr. Littman contend here that Central West does not serve a portion of Clay County?

Presiding Examiner: No, sir. He said that Central West does serve a portion of Clay County, as I understood him.

Mr. Littman: It serves a portion of Clay County, but not all of Clay County. That is my understanding of the situation. Is that right? May I inquire about it?

Mr. Seacat: There is no question but what a portion of Clay County is served by the Gas Service Company.

Mr. Woods: Central West does serve a portion of Clay County, also.

If the Examiner please, I request that an identification exhibit number be assigned to a document designated "Table 2, Population, Kansas City Metropolitan Area and Clay County, 1940 to 1950."

Presiding Examiner: Exhibit No. 110 for identification.

(The Document above referred to was marked for identification as Exhibit No. 110.)

2277

By Mr. Woods:

Q. Dr. Gaw, directing your attention to what has been marked as Exhibit 110 for identification, I will ask you to state what that document is? A. That document shows the most recent forecast which the City Plan Commission has made for the four-county area, plus Platte County, a fifty county, which we have reason to believe will be part of our metropolitan area by 1960 and 1970. I state that partly on the grounds of the work I did with the Census Bureau before 1950.

In 1948 or 1949, the Census Bureau asked a local committee, of which I was a member, to help determine what the metropolitan area should be. We decided on four counties, and they took our recommendation without change. We have reason to think that by 1960, we will have the fifth county and the Census Bureau, we believe, will take our recommendation again as they did before, on that.

Mr. Woods: Now, if your Honor please, I request that an exhibit number for identification be assigned to a document designated "Table 3, Industrial Districts."

Presiding Examiner: Exhibit 111 for identification.

(The document above referred to was marked as Exhibit No. 111 for identification.)

Mr. John A. McGrath: Mr. Examiner, while they are distributing the exhibit, I wonder if I might ask

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a clarifying question on Exhibit 110.

Presiding Examiner: Yes.

Mr. John A. McGrath: Where in the 1960-1970 figures is the fifth county shown?

The Witness: It is now shown separately. It is shown in combination with the other four.

Mr. John A. McGrath: Do you have separate figures on that?

The Witness: Yes. Platte County in 1960. We expect the fifth county in 1960 to be about 26,000 and in 1970, about 35,000.

Mr. John A. McGrath: These townships Gallatin and Liberty, are not in Platte County, are they?

The Witness: No, they are in Clay County.

Presiding Examiner: Mr. Woods, do I understand you that the figures with respect to the counties other than Clay County in these exhibits for identification are primarily for the purpose of reinforcing your position with reference to the population growth in Clay County?

Mr. Woods: And in the certificated area of Central West inside of Clay County, yes, your Honor.

By Mr. Woods:

Q. I direct your attention, Dr. Gaw, to what has been marked for identification as Exhibit 111. I will ask you to state what that document is.

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A. That document is a listing of the industrial development and the employment in the industrial districts most closely associated with Clay and Platte Counties, and that portion of the metropolitan area, North Kansas City Industrial District in Clay County, Wabash in Clay County, Northeast Industrial District across the river in Kansas

City, Missouri, and Jackson County, and Fairfax Industrial District in Wyandotte County, Kansas—all of them closely connected with Clay and Platte Counties.

Mr. Woods: Now, if your Honor please, may I request an exhibit number to be assigned to the map designated "Kansas City Area Map," and showing thereon the boundary of the area certificated to Central West by the red hatched line.

Presiding Examiner: Have you a copy for the Examiner?

Mr. Woods: I have copies that will be distributed.

Presiding Examiner: Exhibit 112 for identification.

(The document above referred to was marked as Exhibit No. 112 for identification.)

Mr. Woods: Mr. Examiner, may I request that an exhibit number be assigned for identification purposes to the map designated "Boundary Area Certificated to Central West Utility Company," and showing that territory in red hatched lines. Here is a copy for the Examiner.

Presiding Examiner: Exhibit 113 for identification.

2280

(The document above referred to was marked as Exhibit 113 for identification.)

By Mr. Woods:

Q. Directing your attention, Dr. Gaw, to what has been marked as Exhibit No. 112, I ask you to state what that map is? A. That is a map of the Kansas City metropolitan area, the present metropolitan area, plus Platte County. It is a map which shows the distances from the downtown district in five mile concentric circles, and it indicates the territory certificated to Central West Utility Company.

Q. The area outlined in the red hatched lines is the area certificated to Central West as shown on this map? A. Yes.

Presiding Examiner: Mr. Wood, there is no red hatched line on my map.

The Witness: It is blue on yours. It is dark blue.

Presiding Examiner: How about the official copies handed to the reporter?

Mr. Woods: Blue hatched lines is the correct designation.

Mr. Littman: Mr. Examiner, I think before any further testimony is given with regard to these documents, these maps, there ought to be some foundation laid as to just what participation, if any, this witness had in connection with

2281

the preparation of these maps or any lines drawn on them. I have not heard one word so far as to whether this witness has prepared any of these exhibits or whether she has anything to do with the assembling of the material or the preparation of the maps or anything else.

I am going to object.

Presiding Examiner: Can you lay a foundation, Mr. Woods, as to what this witness knows about this map, Exhibit 112?

Mr. Woods: Yes, your Honor.

By Mr. Woods:

Q. Was Exhibit No. 112 prepared under your supervision? A. Yes, it was.

Q. Does that exhibit, No. 112, show the township of Gallatin and Liberty in Clay County, Missouri? A. Yes.

Q. And is the map marked as Exhibit 112 a standard map of the metropolitan Kansas City area published by the Gallup Map Company in Kansas City, Missouri. A. That is true.

Q. And the data you referred to as the five mile circles, the blue cross-hatched area showing the Central West

territory, and the other superimposed data, including the townships of Liberty and Gallatin, were all placed on there under your supervision?

2282

A. Yes.

Q. Is the same thing true, Dr. Gaw, with respect to the preparation of Exhibit No. 113? A. Yes, it is.

Presiding Examiner: That was also prepared under this witness' supervision? Is that what you mean?

Mr. Woods: That is what I mean, Yes, your Honor.

By Mr. Woods:

Q. Were Exhibits No. 109, 110, and 111 prepared by you and under your supervision? A. Yes, they were.

Mr. Woods: At this time Central West Utility Company offers in evidence Exhibits No. 109, 110, 111, 112, and 113.

Mr. Littman: Mr. Examiner, I would like to simply reserve our right to move to strike these exhibits later on. I think they are of doubtful materiality, but for the present, in order to expedite the matter, I would like to leave that matter for later consideration.

Presiding Examiner: What is the first number of this series of exhibits you offer?

Mr. Woods: 109, your Honor.

Presiding Examiner: Exhibits 109, 110, 111, 112, and 113 are received in evidence.

2283

(The documents previously identified as Exhibits Nos. 109, 110, 111, 112 and 113, were received in evidence.)

Mr. John A. McGrath: Mr. Examiner, did you say received in evidence?

Presiding Examiner: Yes.

Mr. John A. McGrath: Mr. Examiner, we haven't had an opportunity to look these over.

Presiding Examiner: They were offered in evidence, and I didn't hear any objection.

Mr. John A. McGrath: I believe Mr. Littman stated he would like to reserve——

Presiding Examiner: He didn't make any objection. He said he would reserve his right to make a motion to strike. Now do you wish me to erase my ruling in effect and withhold passing upon the admissibility until you have had a chance to inspect them?

Mr. John A. McGrath: I don't like to appear as though I were dormant in this situation, Mr. Examiner, but the procedure has been on the part of the Examiner for these past few days that you have been reserving your ruling.

Presiding Examiner: Those were different——

Mr. John A. McGrath: I am sorry. I base my apparent dormancy upon an unsound assumption. As I say, I would like to have an opportunity to have cross-examination on these particular exhibits. There are many questions which

I have hopes of getting clarified before I would want to state my position, whether they are objectionable or not.

Presiding Examiner: The exhibits will stand received in evidence. If you see fit, you may join in Mr. Littman's motion to strike, if he makes one, or makes one on your own account.

By Mr. Woods:

Q. Dr. Gaw, referring to Exhibit No. 112, would you state, using that as a reference, and point out the confines of North Kansas City, Missouri, and Kansas City North, the same being in Clay County, Missouri. A. North Kansas City, Missouri, is bounded on the south by the

Missouri River. As can be seen, it is labeled there clearly. And immediately north of it is labeled as "NKC" and immediately north and adjoining is Kansas City, Missouri, or known as Kansas City North.

Q. When approximately did that portion labeled as Kansas City, Missouri, on Exhibit 112, north of the river, become a part of Kansas City, Missouri? A. January 1, 1950.

Q. Does Exhibit No. 112 show anything concerning proposed freeway development in the Clay County area? A. Yes, it does. In a dotted line, not only a proposed but one which is already under construction, carrying through North Kansas City and through Kansas City

North, branching just south of what is labeled Vivion Road, branching and going both to the east and to the west. To the east it goes up through the Village of Claycomo which is in the Central West territory, and on up to Liberty. It is to take the place of the present U. S. Highway 69 and is an improved roadway, an express way which will carry directly into and out of Kansas City.

Q. By "express way," do you mean a type of highway with no grade crossings and no traffic lights? A. And no traffic light, and overpasses, and it expedites and makes access very much easier.

Q. That will have direct access into Kansas City, Missouri, over what bridge? A. Over a new bridge which has been completed within the last 12 months, known as the Paseo Bridge.

Q. Is that shown on Exhibit No. 112 just to the left of the word "Guinotte"? A. Yes, it is.

Q. Incidentially, prior to 1951, how many motor vehicular crossings of the Missouri River were there in metropolitan Kansas City, Missouri? A. I can answer that

in relation to three bridges, the so-called ASB—Armour, Swift, Burlington Bridge, which is just to the left—well, it is the middle one of the three bridges shown. It is labeled Highway 71, Highway

2285-A

69, and 169.

Q. Just above the word "City Wharf" in Exhibit 112? A. Yes, it is just above the word "City Wharf." That ASB Bridge at the end of the war, 1946, had about 8 million river crossings. In 1954 it had over 12 million.

Q. The bridge to the left of that was in existence prior to 1951, was it not, the bridge appearing on— A. Yes, it has been since 1869.

Q. —Exhibit 112 just below the area defined "Kansas City Municipal Airport." A. Yes.

Q. What is that bridge known as? A. That is known as the Hannibal Bridge. Just following the war, 1946, it had 2,500,000 river crossings. In 1954, it had in excess of 4,500,000.

Q. I believe you said that there were three motor vehicular bridge crossings of the Missouri River in metropolitain Kansas City area prior to 1951. Is the third the so-called Fairfax Bridge, shown in Exhibit 112 above the word "Fairfax Indust."? A. Yes, Fairfax Industrial District. The Fairfax Bridge in 1946 following the war had just over 500,000 river crossings. In 1954 it had practically 5 million.

Q. What additional river crossings have been constructed and put in use, by way of bridges which have been erected

2286

since 1951?

Mr. Littman: Mr. Examiner, I have been listening to this patiently for the last 15 minutes. I can't for the life of me see any relevance to it. I have been waiting

patiently for some sort of a tie-in to this proceeding. But it seems to me this is wholly immaterial and irrelevant. Why should we be interested in how many bridges are being built across the Missouri River north of Kansas City and vice versa? Kansas City is served by the Gas Service Company.

It is not involved in this proceeding except they want a little quantity of gas down on the lower side of the map. It seems to me we are going into some modern history of the growth and development of Greater Kansas City area that doesn't have any effect on this proceeding.

We are simply here seeking a certificate to increase our main line capacity and certain laterals, one of which is not this particular lateral.

Under the decision of the Court—and I am not smiling or laughing at anybody when I make this statement, I am going to read what the Court said and I don't know whether they were smiling or what they were doing when they said it, but they said this, and this is the law:

"In the light of Section 7(a) we are compelled to conclude that Congress meant to leave the question whether

to employ additional capital in the enlargement of its pipeline facilities to the unfettered judgment of the stockholders and directors of each natural gas company involved."

That appears on page 680 of Federal Reporter, Second Series, Volume 204.

Mr. Examiner, I don't think this has any materiality to any issue in this proceeding.

Mr. Christiansen: Mr. Examiner, I don't agree with Mr. Littman about The Gas Service Company. We are very much in this case.

Mr. Woods: If the Examiner please, with your indulgence, I would like to address just a few remarks to what

Mr. Littman has said. I am offering this testimony, if the Examiner please, for the purpose of showing the potential residential and industrial development in Central West's certificated territory which has a direct bearing upon the discrimination issue in this proceeding.

If your Honor will permit me, Central West has been the subject of the discrimination which was found by the Commission in Order No. 218, which has continued ever since that time and which is being compounded and perpetuated by the increased expenditures on other laterals proposed by Panhandle in this present docket G-2433. That discrimination, your Honor, has been so severe that as a result of it, Central West Utility here has had to cede involuntarily

portions of its territory because Panhandle has refused to supply Central West with the gas it needed to meet the growing demand for gas in its territory.

Presiding Examiner: I overrule the objection.

By Mr. Woods:

Q. I believe my last question to you, Dr. Gaw——

Presiding Examiner: Do you want it read by the reporter?

Mr. Woods: Yes, your Honor.

Presiding Examiner: Read it, Mr. Reporter.

(Question read.)

Presiding Examiner: Dr. Gaw, had you completed your answer to that question?

The Witness: No, I hadn't.

Presiding Examiner: Will you proceed?

The Witness: I can't remember how much I said of it.

Presiding Examiner: Read the answer, Mr. Reporter.

(There was no answer to be read.)

A. Since 1951 two new river crossings in Missouri have been completed and are in use. One of them is the so-called Paseo Bridge which leads right into the proposed express way, which was mentioned earlier. The other one is the Choutea Bridge which was originally a railroad bridge used by the Milwaukee Railroad and has now been transferred to vehicular traffic.

In addition to that a third one is under construction, the

Broadway Bridge. It is an extension of what is marked Broadway on the map and the roadway leading directly to the municipal airport and farther on north into Clay County and then into Platte County.

A fourth one that is under contemplation and ready to begin in the near future, is a second bridge from the Fairfax Industrial District in Kansas over across into Missouri on the north side of the river.

By Mr. Woods:

Q. The bridge you refer to as the Choutea Bridge: Is that shown on Exhibit No. 112 in the line marked "Proposed Manchester." A. Yes, it is.

Q. The so-called Broadway Bridge is the one that is being erected just to the west of the bridge going to Kansas City Municipal Airport as shown on Exhibit 112? A. Yes, that is right.

Q. And the third bridge to be constructed that you mentioned in the Fairfax District will be in the vicinity of the bridge shown on Exhibit No. 112 above "Fairfax Indust.", the legend there? A. Yes.

Q. Would you just testify and explain, if you will, where on Exhibit No. 112 the boundaries of Gallatain township and Liberty township appear?

2290

A. The boundary is indicated by a dotted line. The north boundary of Gallatin township is just south of the word "Nashua," and goes over to the east almost to Highway 71, where it goes south to Claycomo, and then it is a very irregular line down to the Missouri River.

Q. Following what is designated as Shoal Creek on Exhibit 112? A. Yes, that is right.

Q. And the west boundary of the township is the Platte County-Clay County line? A. Yes.

Q. Included within Gallatin township is the area you have described as Kansas City North, and also North Kansas City? A. Yes.

Q. Liberty township in general lies just to the east of Gallatin township, does it not? A. Yes, it does.

Q. And includes within it the City of Liberty as shown on Exhibit No. 112? A. Yes.

Q. At the present time has the City of Kansas City, Missouri, annexed additional territory to its corporate limits in Clay County, Misouri. A. Yes, it has.

2291

Q. Directing your attention to Exhibit No. 113, would you point out for the record the new city limits as shown on that exhibit of Kansas City, Missouri, north of the river in Clay County, Missouri? A. The north boundary of the new annexation is indicated almost at the top of the map where it says "Kansas City, Missouri, City Limits." The west boundary of that new annexation is the Platte-Clay County line.

The east boundary is indicated, as the other boundaries are, by a dotted line which goes east to the middle of Section 8 and Section 17, and then east again over to the dividing line between Gallatain and Liberty townships.

From there south along the Gallatain township boundary down to the river.

Q. That annexation, as approved, will not be effective until what date, if you know? A. 1959.

Presiding Examiner: Mr. Woods, would it be an imposition for the witness to refer to the Exhibit 112 and Exhibit 113 as they appear on this big board and point out the areas to which she has reference?

Mr. Woods: No.

The Witness: I will be glad to.

Presiding Examiner: Not to retrace what she has already testified to, but from here on out.

2292

By Mr. Woods:

Q. If you will, you might point out in general the northern boundary line and the eastern boundary line of the newly annexed territory of Kansas City, Missouri, in Clay County, Missouri. A. The northern boundary line starts at the Platte-Clay boundary line and goes eastward, then south, then this irregular line that follows Shoal Creek down to the Missouri River.

Q. All of that territory which lies within that area becomes a part of Kansas City, Missouri, in 1959? A. With the exception of some small areas which are already incorporated.

Q. And you are referring to the incorporated villages designated as Oaks and Oakview, Oakwood and Oak Park and Gladstone on Exhibit 113? A. That is right.

Q. On Exhibit No. 113 would you point out the express way system leading over the Paseo Bridge into Clay County, Missouri, that has been completed and that is proposed, for which construction will shortly commence. A. It has already commenced. Starting with the river——

Q. The Missouri River? A. The Misouri River—going across the Paseo

2293

Bridge through North Kansas City, the proposed highway is this dotted line up to a "y" here where it branches to the east and goes on up beyond Liberty through the Central West area, and then from the Y it goes to the west over into Platte County and joins U. S. Highway 81.

To the east here, it will take the place of the present U. S. Highway 69 as an improved roadway, a four-line express way. So that it will be possible to drive from Excelsior Springs, which is farther up here, into Kansas City and across the Paseo Bridge without any stop lights, without any interruptions.

Presiding Examiner: Does that complete your answer to the question, Dr. Gaw?

The Witness: Yes, that does.

. . . . . .

2295

Q. Dr. Gaw, can you state what the relative distribution of population is in Gallatin Township? By that, I mean where are the populated areas located in Gallatin Township? A. In Kansas City North and in North Kansas City. Those are the incorporated areas. Then, in the unincorporated

2296

areas, the portions that are shown on the large map in red and the others where you see street patterns—in other words, the Central West area contains most of the heavily populated areas in Gallatin Township outside of those two incorporations.

Q. Do you mean by that, with reference to Exhibit No. 113, the main populated areas in Gallatin Township are in North Kansas City, Kansas City North, and the portion of the Central West territory that lies in Gallatin Township? A. Yes.

Q. With reference to Exhibit No. 110, can you tell me the approximate population as of the present time in the Central West territory located in Gallatin Township? A. About 11,000; a little over 11,000, as of 1954.

Q. How do you arrive at that, Dr. Gaw? A. By taking the population of Gallatin Township and subtracting out Kansas City North and North Kansas City, because of the density of population otherwise is in the Central West area.

Q. For the year 1960, what do you predict will be the approximate population of that portion of the Central West territory in Gallatin Township? A. About 16,000.

Q. And in 1970, what is your forecast? A. 23,000 for that same area, that same approximate area.

Q. In arriving at those conclusions for those forecasts,

would you state what, if any, bearing the population figures and trends for the other portions of the metropolitan area as shown in Exhibits 109 and 110 have, what relation? A. It goes back to the way the population forecast is made, which is by means of finding one big overall figures for the entire area by the method I mentioned, of relating it to the United States population.

Then that one large figure is broken down into four, one for each of the four counties, and the four are determined by their relative drawing power.

In other words, the fact that Clay County is as much as it is is because of its relative drawing power in relation to what is in the other three counties. You can't consider one—I mean, you can't make a population forecast by any of the reputable methods that I know of, anyway, without considering the whole and then breaking it down into parts.

Q. So there is a definite correlation and relationship

between the population trends in the parts of metropolitan Kansas City other than the Central West territory in determining what the forecast is for the Central West territory? A. Definitely. You can't consider part without the whole and break it up.

Q. With respect to Liberty Township, can you state where the concentrated population is in Liberty Township?

2298

A. It is pretty largely in the City of Liberty and some along the main highways, of course. It is largely in the City of Liberty. In Liberty Township, it falls within the Central West area, the populated portion of Liberty Township.

Q. In general, does it also follow the course of what is designated as Highway 69 and also the proposed new freeway on Exhibit No. 113? A. It does for our forecasts even more than for the present.

Q. With reference to Exhibit No. 110, what figure on there indicates the approximate population at the present time and for 1960 and 1970, for the Central West territory and the Liberty Township? A. Liberty Township is 10,100, approximately, as of 1954. For 1960, it is 14,000 forecast; for 1970, about 21,000.

Liberty Township population is centered in the Central West territory.

Q. Dr. Gaw, would you state generally, but briefly, the nature of the territory lying within Central West certificated area shown in Exhibit No. 113 with respect to its residential development? A. It is primarily gently rolling, quite attractive from the scenic point of view. It has excellent access both into and out of Kansas City through these highways that are proposed, as well as the present ones.

2299

It is good for both residential and industrial development because of the sites that are available—that is, sites where there are no very steep grades, no natural barriers to development, and there are railroads—I believe there are five altogther into that ara—five major trunkline railroads.

There are good highways. There are two barge lines on the Missouri River which would be accessible to industry if it needed them or wanted them developed.

The type of home that has developed there, in a very spectacular manner in the last 10 years or eight years, are single-family homes where the occupants are owners, and, of course, there is the annexation to Kansas City, Missouri, which was studied very carefully, almost every inch of it, to determine where the population would be and what type of population and so on.

Q. Would you say that area is desirable for residential development? A. Highly desirable.

Q. In connection with your work with the City Plan Commission, are you familiar with any presently proposed housing developments within Central West territory that are either actually underway or that are proposed for the immediate future? A. Yes, there are a number of them. Would you like

2300

me to point them out on the map?

Q. Would you point them out on Exhibit No. 113, if you please? A. They are indicated by these hatched areas on the map within the red lines here. I will tell you the approximate number of homes that are proposed by developers. In some instances, the homes are already built. In others, they are under construction, and in some they have been announced but are not yet built.

(2300)

Mr. John A. McGrath: Mr. Examiner, I object to any statements as to what builders propose to do. I don't know that there is any showing here of what knowledge she may have as to what builders plan to do in the future sometime.

Presiding Examiner: I will overrule the objection.

The Witness: Actually, some of those builders have to submit preliminary plats to the City Plan Commission before they can go ahead, so we are familiar with their plans.

Here there are about 340 homes proposed. Then, coming on down to each of these areas south, 650 homes, 145, 205, 50, 55, 36, 62, 800 in this large area——

By Mr. Woods:

Q. If I may interrupt you for a minute. You have been pointing to the area on Exhibit No. 113 which covers the various Oak Villages—Oaks, Oakwood, Oak Park, and the territory immediately adjacent to them?

2301

A. Yes.

Q. Now, would you continue, please? A. Then going up here, 68 homes here.

Presiding Examiner: What do you mean by "here"?

The Witness: Where I am pointing.

By Mr. Woods:

Q. If you would state so the record would indicate clearly. A. It is within the Central West territory. This particular one is directly north of——

Q. It is in Section 10, is it not? A. Section 10, yes, just to the north and east of Oak Villages.

Mr. Christiansen: May I ask what the total is, please?

The Witness: The grand total of all——

Mr. Christiansen: I mean of the area you just described.

Mr. Woods: We could calculate that in just a moment.

The Witness: This one is 54 proposed homes.

Presiding Examiner: The record isn't clear, Dr. Gaw, because what you are saying is being written down here and transcribed. What do you mean by that one?

The Witness: I will have to point out and described them, then. Would you like the names of the developers? Would that be a description?

Mr. Flax: It is the development in Section 10 they are

referring to, isn't it, Dr. Gaw?

The Witness: This one is in Section 10, yes. This one —actually, I was wrong on that. I had it written down wrong. This is a section where negotiations are at present underway, and we are not sure exactly how many there would be there.

This one, which is in Section 55, has 800 homes proposed, some of them already under construction.

By Mr. Woods:

Q. That is marked Peterson-Byers? A. Peterson-Byers, Meadowbrook Development.

Coming up here north of the north portion of Liberty, it is within their new annexed territory of Liberty, Blueberry Hills addition has approximately 100 homes.

Coming south here to the south portion of Liberty, Brookview Gardens has 54 homes proposed, and there are 200 in Liberty Heights. Again, that is adjacent to the City of Liberty.

Q. And the Craig Crest development in North Liberty? A. Craig Crest has 49 homes in North Liberty. Coming on down here on Highway 71 bypass, there are 68 new homes in the South Country Club addition.

Q. What is the Mulhern Building Company and so designated on Exhibit No. 113? A. Yes. Then this very large

development, which is immediately adjacent to Kansas City, Missouri, and which will

2303

be part of the annexation going into effect in 1959, the J. P. Wolfe Construction Company, a 2700 home development. They are also proposing a $9 million shopping center.

Q. That is in Section 34, just south of Clay Como? A. Right.

Q. Where is the Ford plant with reference to that Wolfe Construction project of 2700 homes? Would you point it out on Exhibit No. 113? A. The Ford plant is on Highway 69 in the corporate limits of the Village of Clay Como, right about where I am pointing.

Q. That is just north of the J. P. Wolfe project? A. Yes.

Q. What is the total number of homes, if you can tell us, if you please, that you have just referred to that are either proposed or actually in the process of construction? A. Approximately 5600, somewhere over 5600.

Q. That is all within the certificated area of Central West Utility Company? A. Yes, it is.

Q. Is there a proposal to build any residential housing over in Section 27, the northwest corner of Central West territory? A. Yes. There is a proposal to build 340 homes there by the Hamer Construction Company.

2304

Q. From your knowledge of these plans and the proposals, can you state over what period of time these approximately 5600 homes will be built? A. Judging by past developments, the speed of past developments in this area, I would expect it to be within the next three or four years, possibly sooner. Some of them, of course, are already done.

Q. Can you state approximately at what rate per year how many homes will be constructed in that area? A. It depends on a number of factors. One of them is whether or not they can get gas.

Q. Assuming that gas is available. A. Assuming that gas is available, basing it on our population studies, we expect population growth to be rapid now up to about 1960, and then perhaps to level off a little bit like the Federal Census Bureau expects the nation's population to level off.

So it would be within the immediate time, and might average out about 5600 divided by the four or five years.

Q. Can you state whether or not there are any retail business areas being developed in that general territory that will have an effect upon the population growth in the Central West territory? A. There are two very outstanding ones within Kansas City, Missouri, based on the assumption, on the market analysis

for them, based on the assumption, of course, they would grow up all over Clay County, and perhaps Platte County.

One of them is located right here at the "Y" of the proposed highway. That is a combination shopping center and housing development by an outstanding Kansas City company. That is the Bruening & Dunn Construction Company.

Q. You are pointing to the junction of the proposed freeway in Section 1 on Exhibit No. 113? A. That is right. The other one actually under construction is just north of Highway 169, at the junction of Highway 169 and Highway 1.

Q. In the area marked Green Haven West on Exhibi No. 113? A. Yes.

Q. Would you describe that development? A. That is a very large shopping center. I think it is supposed to

be about $5 milli- by the time it is done by the Curry Real Estate Company, which is an outstanding Kansas City organization.

In addition, there is this proposal for a $9 million shopping center in the Wolfe Construction Company.

Q. In your opinion, will the development of those shopping centers have an effect upon the residential development within the Central West Utility territory? A. Very definitely, because that is one of the factors

that is helpful in selling these homes; I mean, to have shopping facilities close and easily accessible by these new and proposed highways.

Q. Is there any industrial area at present within Central West Utility Company's certificated territory? A. There are industrial potentials. As we make our population forecasts, we consider that very definitely, because of the relationship between population and employment.

We feel that there are industrial potentials at several places where there are level sites and transportation is available, where they are flood-free, where there would be some of the utilities.

Q. Would you point out on Exhibit No. 113 those areas that you say lend themselves to industrial development? A. One of them will be right in here.

Q. You are pointing to the area south of Liberty in Section 18, 17 and 13? A. Yes. Then another possibility would be here.

Q. That is Section 3 on Exhibit No. 113, just south of the Wolfe development? A. Yes. Those are both possibilities, and, of course, a very definite relationship to the people living here, we feel, is the further development of the North Kansas City industrial district and further development of the northeast industrial district in Kansas City, Missouri.

2307

Q. The northeast industrial district is that portion marked Kansas City, Missouri, just south of the bend of the Missouri River on Exhibit No. 113? A. Yes, Section 23, 24, and over to 25.

Mr. Littman: Would you mind my asking, Mr. Examiner, at this point, where this last area you are speaking of, Dr. Gaw, how far that is from the Central West territory, the territory served by Central West?

The Witness: The northeast?

Mr. Littman: The one you are just referring to.

The Witness: I think this map will show it. About three miles, and it is connected with this new bridge, the Choutea Bridge. It is also connected to come down this way with the Henry S. Truman Bridge which we didn't even mention this morning, but it does tie in with that.

It is connected through North Kansas City, Paseo.

By Mr. Woods:

Q. Dr. Gaw, is the area adjacent to the Ford plant presently an area held for industrial development and would you state by whom? A. This is referred to frequently in our work as the Wabash Industrial District.

Q. You are pointing to the areas in Sections 26, 27 and 35, where the legend "Clay Como" appears on Exhibit No. 113?

2308

A. Yes. The Wabash Railroad has built a spur—did build a spur—for the Ford plant and has plans for further development of industry in that area.

Q. And there is a spur line running from the Wabash Railroad main line into that area at the present time? A. Yes.

Q. Do you know the approximate size of that Wabash

industrial area in acres? A. I think Ford has about 50 acres.

Q. It embraces more than one section in an area there, does it not? A. Oh, definitely. It runs in my mind 800.

Q. About 800 acres? A. I am not sure.

2309

Q. Can you state the reasons why you think these areas you described in Exhibit 113 lend themselves for industrial development? What factors make them desirable? A. Of course first and foremost they have the factor of Kansas City's geographical location, which is a very very strong attraction to industry, we are told, by national companies that come through, because of its central location in the United States, which helps both as to raw materials and distribution of products.

Then it is served by five trunkline railroad. It is served by, or could be served by two barge lines if the industry develops there that wants barge line facilities. It is served by several good routes for trucking, truck lines. There are level sites and there are sites a long way from any flood danger up here on ground where they can be constructed relatively cheaply, because there are no relatively steep grades. Then it has a good labor pool in that there are people living in here and here and all around in the metropolitan area who can get there relatively easily.

It has power in a great quantity and it has water.

Q. How about air transportation, air freight? A. Air freight is very close here at the Kansas City Municipal airport, the Slick Air Freight has regional headquarters in Kansas City and comes in and out of the municipal airport several times a day. That is quite close.

2310

Q. Dr. Gaw, do you have an opinion as to the relative desirability, shall we say, of the Central West territory

in Clay County, Missouri, for residential and industrial development as compared with the rest of the metropolitan area?

Mr. Littman: I am going to object to that, Mr. Examiner. I think we are getting very far afield from any issues in this proceeding. It sounds like a Chamber of Commerce brochure now rather than anything relating to this proceeding.

(Question read.)

Presiding Examiner: I think it is a proper question.

By Mr. Woods:

Q. I asked you if you had an opinion? A. Yes.

Q. What is that opinion? A. My opinion is that it ranks as well, if not better—it is better than certain portions of the metropolitan area and it is as good as any, both as to residential development and as to potential for supply.

It is definitely better than some portions because of its closeness to downtown Kansas City and because of its flood-free sites and a number of other factors. None of them, I would say, exceeded it in desirability.

Q. Dr. Gow, if natural gas is available in sufficient

quantities in that area, would that be a stimulous to both residential and industrial development in your opinion? A. I think there is no question about it.

Mr. Woods: That is all. You may inquire.

Presiding Examiner: Cross-examination by counsel for Panhandle Eastern?

Mr. Littman: I have a few questions, Mr. Examiner.

Cross examination

By Mr. Littman:

2313

Q. You have spoken of the territory served by Central West Utility Company. Am I correct in understanding from

2314

Exhibit 112 that that is the area which lies within the rather irregular series of steeps or squares shown by a heavy line in that exhibit which is marked off in the legend and which includes the city or town of Liberty, Glenaire, Claycomo, is that right? A. Yes, that is right.

Q. Who supplies gas to the balance of this area, if you know?

I am speaking now about the balance of the area, the balance of the area shown in this map, Exhibit 112. A. I am not an authority on that. I understand that the Missouri Public Service Company does to some of it, and The Gas Service Company to some of it. I am not sure whether the Missouri Power and Light does or not, some of the rest.

Q. You do know, don't you, that The Gas Service Company supplies all the gas within the corporate limits at least of Kansas City, Missouri, and Kansas City, Kansas, do you not? A. I don't know that they do or not in Kansas City, Kansas. I know that they do in Kansas City, Missouri.

Q. Do you know that they obtain their gas from Cities Service Gas Company? A. I understand they do.

Q. And the Missouri Power and Light Company supplies the gas to Excelsior Springs?

2315

A. Yes, I understand so.

Q. Will you please refer to Exhibit No. 111, which is entitled "Industrial Districts." I note first you show North Kansas City, Clay County, and you show under the head-

ing "Industrial Development," "Property Evaluation, 1950," the sum of $107 million-plus, and employment in 1954 of 15,750.

Is any of that area served by Central West Utility Company? A. The portion of it that is Kansas City, Missouri, which is the municipal airport, I believe that is. I am not sure whether North Kansas City is served by the Cities Service or not, or The Gas Service Company, or not.

Q. I am asking you whether any part of this particular territory shown in this line is supplied with gas by the Central West Utility Company? A. As far as I know, the answer would be no to that.

Q. How about the next line, $30 million Ford plant in Wabash, Clayconio in Clay County? Is that plant served with natural gas, do you know? A. I believe it is, yes.

Q. Do you know who serves that plant? A. I think The Gas Service Company does.

Q. The next line shown is Northeast Kansas City, Missouri. That $59-plus of industrial development and 4300

employees shown for 1954, that is all outside of the Central West Utility territory? A. Yes.

Q. You must answer, otherwise the reporter won't get it just by nodding your head. A. Yes.

Q. The next line, Fairfax, Wyandotte County, Kansas, $138 million-plus of industrial development, property evaluation for 1950, and you show employment in 1954 of 30,000. Is that all outside of the Central West Utility's service area? A. I believe so.

Q. Now will you please turn to Exhibit 109, where you show the populations of four counties. First Jackson County. That is outside the area served by Central West. Right? A. I think it is.

(2316)

Q. You don't know? A. I am not sure whether it all is outside.

Q. How about Wyandotte County, Kansas? A. Wyandotte County, I understand is outside.

Q. And Johnson County? A. Johnson, also.

Q. Cay County, Missouri— A. Pardon me, I want to take that back about Johnson.

2317

I understand Central does serve part of Johnson and Wyandotte in their Kansas City division.

Q. Can you tell us what parts? A. The big map would show it, around Bonner Springs and around DeSoto in Johnson County, Bonner Springs in Wyandotte County.

Q. Can you tell us on your Exhibit 109 how much of the population in Johnson County lies within the territory served by Central West, and how much of that population outside that territory? A. I don't believe I can answer that because I am not sure of exact boundaries around in Wyandotte and Johnson Counties.

Q. The same answer goes for the statistics shown on Exhibit 109 for Wyandotte County? A. Yes.

Q. How about Clay County? That one I think you have earlier stated is served in part by Central West and also in part by Missouri Power and Light, and I think also in part by The Gas Service Company. Can you break out of those figures in the five lines under that county on Exhibit 109 what portion are applicable to the territory served by Central West Utility Company? A. In Exhibit 109, Clay County, as of 1950, as given there, the portion served by Central West, as I would estimate

2318

the population for 1950, would be about 7,000 as of 1950.

Q. That is your present estimate, 7,000— A. Not the present. As of 1950.

Q. I am sorry. As of 1950, 7,000 out of the 45,211 of population in 1950 were located in the portion of Clay County served by Central West. Is that right? A. Yes, as of 1950.

Q. What about the figure as of 1940? A. As of 1940, about 3,700.

Q. Are you just making these estimates up from memory as you go along, or have you actually made those estimates before you came here? A. I have made them in this respect. I made them through the analysis of Gallatin township, because—as a matter of fact, to correct what I just said, I gave you Gallatin township only. It should be Gallatin plus liberty township, because Central West serves both of those, and the 7,200—or 7,000 we will say, for 1950—is Gallatin township.

You should add to that Liberty township, which is another 7,400. You get about 14,600, in other words, for 1940.

Mr. John A. McGrath: 1940 or 1950?

The Witness: Pardon me, 1950. About 14,600.

By Mr. Littman:

Q. You wanted now to change the 7,000 you gave earlier

to 14,000? A. Yes.

Q. That is for 1950. What would you change the 3,000 for 1940 to. A. I would do just the same thing at Liberty township and the portion of Gallatin township which they serve, which makes about 9,700 out of 30,000 as of 1940.

Q. Just how did you arrive at those proportions? Did you take any survey, or is this just kind of a rough estimate? A. The Census Bureau made a survey in both 1940 and 1950, and I have used the Census figures. The Census determined the total for the county and determined the total for Gallatin and Liberty townships, and determined

the total for Kansas City North and for North Kansas City.

Q. But the Census didn't make any separate determination for the area within Clay County that is served by Central West Utility Company? A. No.

Q. You did that? A. I did that, with Census figures.

Q. My question is, how did you do it? A. I did it by the fact that other than Kansas City North and North Kansas City, the population in Gallatin township is largely concentrated in what happens to be the Central West territory.

2320

Q. What do you mean by largely? Percentagewise, how much would that be? A. I would estimate probably 90 percent, if not more, of the population is in the area served by Central West.

Q. You made no specific survey of that, did you? A. Well, yes, I would say that I did. I mean, I would say that I analyzed my figures and went over my maps and made a survey in that sense of determining it. I mean, otherwise I wouldn't know that any percent was in that area.

Q. That is for Gallatin, now? A. That is Gallatin.

Q. How did you determine it for Claycomo. Is that the Claycomo township. A. No, Liberty township. Claycomo is actually in both townships. Claycomo has a very small population anyway.

Q. Let's stick to Liberty township, then. How did you break off Liberty township from Clay County? A. Liberty township is given by the Census Bureau. I simply took the figure given by the Census after their survey in 1950—I mean, after taking the census.

Q. You say the "Census." A. The U. S. federal census of 1950.

Q. A large part of Liberty township is not served by Central West. Isn't that true?

2321

A. When you say "a large part," do you mean in area or in population?

Q. Interritory. A. I am dealing in population, which means people, of course, not square miles. As far as people are concerned, I would say that Central West did serve a very large portion of it. As far as square miles, I am not sure. I would have to study that.

Q. Percentagewise, what proportion of the population in Liberty township is served by Central West in Liberty? A. I would say that at least 90 percent of Liberty township's population is served by Central West.

Q. Will you please turn to Exhibit 110, where you show the population for the Kansas City metropolitan area and Clay County for the period 1940 to 1970, by decades. I see some of the same figures that were on Exhibit 109 are also on Exhibit 110, particularly for Clay County. Is that right? A. Yes, that is true.

Q. Would your testimony with regard to Clay County apply with equal force to Exhibit 110 as to how to break out the portion of Clay County applicable to Central West? A. Assuming that the housing developments can go forward as they now seem to be, yes.

Of course if there is anything to hamper housing

2322

development, that would change it by 1960 or 1970. If they can't get water, if they can't get gas, if they can't get power, people are not going to live in the houses.

Q. Will you please look at 110 now under the heading of 1954, and state what portion of the 64,100 people who lived in Clay County in 1954, lived within the territory

served by Central West? A. Approximately 21,000, I would say, out of the 64,000, as of 1954.

Q. And out of the 84,000 shown in 1960 for Clay County, what is the number in the territory served by Central West? A. Approximately 30,000.

Q. With regard to the 122,00 for 1970, what portion is within the territory served by Central West? About 45,000.

Q. Are you simply applying some kind of a percentage here— A. I am doing just what I told Mr. Woods a little while ago. I am taking the township of Gallatin, subtracting Kansas City, Missouri, and Kansas City North, which are incorporated and are not in this territory, and taking the remainder of Gallatin township and adding that to the total of Liberty township. You can do that yourself, if you like.

2323

Q. That is the method? A. That is the method. And rounding the figure, maybe, if it says 23,900, I call it 24,000.

* * * * * * * * * * *

2344

Lisle Jeffrey

was called as a witness and, after being first duly sworn, was examined and testified as follows:

* * * * * * * * * * *

2345

Direct examination

By Mr. Seacat:

Q. For the record, state your name, residence and occupation, please? A. Lisle Jeffrey. I live in Columbia, Missouri, and work in Jefferson City, Missouri, with the

Division of Resources and Development in the Industrial Section. My title is Industrial Assistant.

Q. How long have you been employed by the Division of Resources and Development, Mr. Jeffrey? A. Since January 1, 1946.

Presiding Examiner: Maybe counsel can help me on this. Does anyone know the last item by reference which was given a number?

Mr. Flax: The last item I have marked, Mr. Examiner,

was Item JJ.

Presiding Examiner: You offered two different sets of material for incorporation by reference, did you not, Mr. Seacat?

Mr. Seacat: Yes, parts of the transcript, and the Exhibit No. 734.

Presiding Examiner: The portions of the transcript in Docket No. G-1116, et al., offered by counsel for Central West, will be received by reference under the rules and identified as Item KK.

(The Document above referred to was identified as Item KK and received in evidence by reference.)

Presiding Examiner: Exhibit No. 734 in Docket No. G-1116 will be received by reference under the rules and identified as Item LL.

(The Document above referred to was identified as Item LL and received in evidence by reference.)

By Mr. Seacat:

Q. Mr. Jeffrey, will you tell the Commission what the Division of Resources and Development of the State of Missouri is? A. The Division was created by the State Assembly to act as a promotional and developmental agency for the resources of the State of Missouri. In

the original charge which we received from the 62nd General Assembly of Missouri, we were

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to work in industry, flood control, aviation, tourist promotion and travel and publicity. Those are the five fields which we have a responsibility for.

I work in the Industrial Section, and I am concerned, of course, as you might expect, with the getting and trying to find new plants for the State of Missouri.

We are trying to find locations for them out-state, if they wanted to move from St. Louis or Kansas City, or the other metropolitan areas, into the more rural areas of the state, and we try to go outside the state and perhaps you might call it, swipe some industry from some other place and bring it to Missouri so that we can provide employment for Missouri citizens.

Q. Generally, can it be said that the function of the Industrial Development Section of the Division of Resources and Development is to become familiar with the resources of the various communities and localities in the state which are necessary and desirable in the establishment and operation of industrial enterprises of one kind and another which offer opportunities for employment of labor for the use of raw materials of the state? A. Possibly I didn't make myself clear. In the first statement of the charge from the 62nd General Assembly, we also have to assemble and collect and publish, make public, any data on the natural resources that we can find which we

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can use to influence industry into getting a start in Missouri.

Q. Mr. Jeffrey, in that connection, in the course of your employment and performance of your duties as the Industrial Assistant in the Industrial Development Section,

have you become familiar with the industrial situation in Clay County, Missouri, and in particular, that part of Clay County, Missouri, situated in and around the City of Liberty, Missouri, and between the City of Liberty, Missouri, and Kansas City, Missouri, North, and I am referring, now, to the exhibits on the easel here that were introduced and sponsored by Dr. Gaw, Exhibits Nos. 112 and 113, the area that has been referred to in the course of this examination as the certificated area of the Central West Utility Company which is that part of the map enclosed in hatched lines? A. In all frankness, I would say I haven't gone into it in near the detail that Dr. Gaw has. However, as a regional area and as an area close to a center of population, we have made certain observations and have been working with communities in that area trying to get industry to move to the area.

Q. Can you name some of the major industrial enterprises which are operating in Clay County, not necessarily restricted to this district? A. I suppose our largest investment has already been mentioned. It was the Ford plant in Clay Como. However,

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we have got some 62 industries in North Kansas City and in the very southern part of Kansas City North as it is known now, which used to be part of Clay County and still is—some of them national in scope, several paint companies, Cook Paint and Varnish Company one of those, Seidlits.

We have some paper fabricators converting waste——

Mr. John A. McGrath: Excuse me, sir. Could you go a little bit slower and speak a little bit louder, please? I can't quite hear you. You said paint companies——

The Witness: Paint companies, one of which is the Cook Paint and Varnish Company. The other is the Seidlits.

We have a paper converter there who makes paper boxes for shipping which are needed in the area.

We have a number of smaller light manufacturing type industries which fabricate metal and plastics and other such items.

We have some rather important food producing or food processing plants in the area. Some of those are national and some of them are not national.

By Mr. Seacat:

Q. I merely wanted reference to some of them to indicate to the Commission the character of the neighborhood industry. Now, Mr. Jeffrey, in the course of your work and your experience, and in a general way, what are some of the important factors that are given consideration by management

of established and prospective industrial enterprises in determining where to locate new plants and factories?

Are there certain factors that they take into consideration, as you have found? A. I think they are standard. Transportation, water, sites, utilities, labor supply, and the fact that you can get services. I think people are interested more in services now that they used to be.

Q. You say services— A. I mean community services such as schools and churches and things of that kind. Those are all considered and are important in the location of industry.

Q. Has the Industrial Development Section of the Division of Resources and Development made a study of railroad transportation and electric power and resources as to the State of Missouri as a whole, and particularly with respect to this area we are talking about? A. If I may——

Q. You have made the study, have you not? A. Yes, we have made the study and published the results on these

maps; of which you have a portion of a total map covering the entire State of Missouri.

Q. Do you have now before you what has been identified as Exhibit No. 114? A. I do.

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Q. —entitled "Data on Industrial Resources Relating to Clay County, Missouri," consisting of three parts of maps, one entitled "Railroad Junction Map," one entitled "Electric Transmission Line," and the third entitled "Water Resources"?

Was this exhibit prepared by you or under your supervision? A. These are portions which we cut up from maps which we publish and send all over the United States to industries.

The first one, as designated——

Presiding Examiner: I don't believe there has been a direct answer to counsel's question. Would you read the question, Mr. Reporter?

(The pending question was read by the reporter.)

By Mr. Seacat:

Q. Was it prepared by you or under your supervision, Mr. Jeffrey? A. Yes.

Q. Do the maps there presented represent facts and figures that have been officially collected by the Division of Resources and Development of the State of Missouri? A. Yes.

Q. You are familiar with the maps and the information in the course of your—in the discharge of your duties and know these maps to be accurate; is that correct? A. As accurate as they can possibly be. Of course,

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you realize they change the day after you get them put out.

Q. I understand that. Do they now fairly reflect the information they purport to reflect as it now exists? A. Yes.

Q. With those qualifications, Mr. Jeffrey, would you take the railroad junction map and explain to the Examiner what it purports to show, and particularly with relation to the area we are talking about?

Mr. Littman: Mr. Examiner, in the interest of saving time, I am going to interpose an objection to any testimony concerning Exhibit No. 114 which consists of the three maps, the first showing railroads and railroad junctions in this part of Missouri, the second one which shows electric transmission lines, the third which shows water resources, namely, consisting of the Missouri River.

I confess I have never seen anything quite so far-fetched as this in any proceeding that I have attended before this Commission, and I have attended a good many of them in the last 15 years or so.

I confess, if this stuff is relevant and material, I would say that statistics as to how many sinks there are in Kansas City and how many paving bricks there are in the streets and all those things are just as material as this.

This, Mr. Examiner, is just pure statistical information. It doesn't have anything to do with the proceeding; nothing

to do with the issues here, which is whether or not Panhandle should be permitted to get a Certificate of Public Convenience and Necessity to install the capacity to serve the natural gas which we have applied to build here.

Mr. Examiner, I am going to just simply interpose this objection and if it is overruled, I am going to ask that the objection be deemed a continuing one in the interest of saving time. I just can't permit this to go in without some protest on behalf of my client.

Presiding Examiner: Does it all go to the general proposition of the prospective growth in Clay County?

Mr. Seacat: That is right.

Presiding Examiner: I will overrule the objection, and it may be deemed that the objection of counsel for Panhandle Eastern goes to this entire line of testimony.

By Mr. Seacat:

Q. Mr. Jeffrey, take the railroad junction map, and in relation to the area we have been discussing here, testify what it purports to show in your view with relation to the industrial resources of Clay County and the Central West area. A. I think it is rather obvious, if you will look at the map in the exhibit, that the area is well served by railroads, which would be one of the factors in industrial location.

Q. Which railroads traverse this area?

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A. CB&Q—if you want the full name of that, it is the Chicago, Burlington and Quincy.

Mr. Littman: I object to reading these names. They are all on the map. Heaven knows this is time-consuming enough. All the names of everyone of these roads is all on this map. We can all read.

Presiding Examiner: Can't you shorten this, Mr. Seacat?

Mr. Seacat: I will be glad to do it, Mr. Examiner. Sometimes I do too little and sometimes I do too much. I never can satisfy everybody else.

By Mr. Seacat:

Q. How many roads did you say there are? A. I think there are five serving the area with interconnection at Kansas City.

Q. What are the interconnections at Kansas City? A. With about six or eight more railroads of principal lines throughout the country, main trunklines.

Q. Does this railroad have ready access to all of the lines of major railroads running into Kansas City, Missouri? A. Yes.

Q. Do the major railroads running into Kansas City, Missouri, provide transportation to and from all parts of the United States, Canada and Mexico? A. They do.

Q. What can you say otherwise about the transportation

facilities that are available to the area we have under discussion? A. As pointed out in Dr. Gaw's testimony, there are two barge lines on the Missouri River. There is air freight, and certainly there is transportation of passengers by air at the airport at Kansas City, and the new commercial airfield in Platte County will have an effect on the area, certainly.

Q. Turn now, Mr. Jeffrey, and can you quickly describe what is intended to be described by the map "Electric Transmission Lines"? A. I think that the quickest answer and the most accurate one would be that it is well supplied with any amount which would be desirable.

Q. Do you know what the sources of power are into the area? A. The Kansas City Power and Light, the steam generating plant at St. Joseph, the one over at Missouri City, and it is in the inter-grid system which connects clear on through to Union Electric and their major subsidiaries into Joppa, Illinois. It is all on a grid system. So power is more than adequate, regardless of how much you needed.

Q. For any of the developments that might occur in the neighborhood; is that correct? A. Certainly at the present time and in the foreseeable

2356

future.

Q. Does the next map, "Water Resources"—is the information contained on that map confined to the Missouri River, or does that show other things than that? A. Of course, as you would expect, the greatest water source is from the alluvial sand which borders the Missouri River, or from the Missouri River, itself. Sometimes they are connected by direct channels of gravel or sand, but sometimes they are not.

I mean, you can get glacial valleys which are filled in the area which will drain into the alluvial sands along the river, but at the same time, would not be depending upon the flow in the Missouri River Basin altogether.

The area north of the blue cross-hatched area bordering the Missouri River has water, but it is mineralized at depths and it can be used industrially, but cannot be used as a supply for drinking water.

In that area, we usually either pipe it in from the alluvial sands or construct surface reservoirs for industry and communities.

Q. In your judgment, Mr. Jeffrey, is there an adequate water supply in this area to take care of all—A. Water is certainly not a limiting factor in the development of the area.

Q. What do you say now about the nature of the land

2357

in the area, and particularly in the certificated area of Central West with respect to its desirability for sites for factories and plants industrially? A. Well, the Wabash tract, of course, is a good one. It is of considerable size. It was pointed out as lying just south of the Ford plant there along the railroad spur. The community of Liberty has one or two smaller tracts which are available. We

have no inadequacy in the area of tracts that are available and could be purchased at a cost not prohibitive to industry.

Q. Is it not true, as was demonstrated two or three times in the last five years, that a great deal of the industrial area in and around what has been called the metropolitan area of Kansas City is subject to flood? A. We did have a flood up there in 1951.

Q. And the flood demonstrated the fact that you reached a great deal of the industrial area in the metropolitan area, did it not, Mr. Jeffrey? A. Yes.

Q. What about the land and the plant sites that are available in Clay County, Missouri, in this area, with respect to the flood? A. Let me say there are lots of tracts that are above flood stage.

Q. Mr. Jeffrey, is it not a fact that between Kansas

City North, up along this so-called freeway that Dr. Gaw testified to, to and beyond Liberty, a great deal of that is still open farmland? Is that not correct?

Mr. John A. McGrath: Mr. Examiner, I am going to object to the leading character of these questions. I believe they can be couched in less leading terms. The witness seems to be intelligent enough to explain the area without having to be led.

The Witness: Thank you.

Presiding Examiner: I will overrule the objection to the pending question. Of course, I don't believe Mr. Seacat proposes to lead the witness unduly.

Mr. Seacat: Not into trouble, certainly. I heard talk around here about moving the thing along.

The Witness: There are tracts available next to the new freeway and certainly along the railroad spur and along the railroads into Liberty, itself.

By Mr. Seacat:

Q. Are they available at a price level that is not prohibitive? A. That is right.

Q. Mr. Jeffrey, what can you say about the labor supply available for industry in the area? A. We have a surplus of labor in the area at the present time, and apparently it is going to continue that way, if our

2359

past trends are any indication.

Q. Do you show that in your Exhibit No. 115? A. This first map, yes, is a map of the population trends, and this is figured as shown in the scale on a logarithmic sort of a thing. It shows the 48 percent that Dr. Gaw was talking about, taking place in Clay County in the period 1940 to 1950.

The red mark which you see there can be best seen on the map which I have placed over here on the easel.

Q. Let me ask a question, if I might. Have you placed the Missouri map showing all of the state from which this map in the exhibit entitled "Population Trends of the Counties" was taken merely to demonstrate what it came from and what this map is intended to show? Is that not correct? A. That is right.

Q. We don't want to clutter the record with that, because this is all now. Would you go ahead and explain what the red lines show? A. The red marks show a loss in population, and it is primarily in Missouri, a loss in rural population, and as shown by the next page, if you will turn to that, the percentage change by county of urban-rural population lifted directly from the census report of 1940 and 1950, for Clay County alone, shows an increase of 153.3/10 peracent in the number of urban dwellers, and a loss of 15 1/10 pereent in

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the rural farm population.

Mr. John A. McGrath: May I ask where Clay County is on this second map, please?

The Witness: If you will look at the left, where the Missouri River strikes the straight line, that is Jackson County. Just to the right and above the bend in the river you will find Clay County.

Mr. John A. McGrath: I find it. Thank you.

The Witness: On the next map, breaking this thing down a little further and indicating to you the availability of labor in the area, we use the method proposed and advocated by the U. S. Bureau of Census.

As a typical state, we take 40 percent of the total population as the available labor supply in any part of Missouri.

You will notice here that Jackson County and Clay County, the area primarily of interest to this group, had in 1950 between 17 and 25 percent employed in manufacturing industries.

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By Mr. Seacat:

Q. What does that indicate to you now, Mr. Jeffrey? A. May I go to the next one first? The percentage of 1950 labor force employed in agriculture in these same two counties was less than 10 percent. If we take 40 percent of the total population of the area and realize that the maximum employed in manufacturing is only 25 percent, we would almost believe that we had plenty of labor available for employment in the area.

Q. That is in the two counties themseves—Jackson and Clay? A. In the two counties themselves, and in the area surrounding you have additional labor available.

Q. Is there ready access from the centers of population

of that area for people who come and go therefrom? A. There is good transportation for thirty miles around the area in most directions. We certainly know that people travel thirty miles to find work.

Q. Mr. Jeffrey, I think you mentioned one other factor, and that was the matter of fuel as one of the factors considered by management of industry in locating the plants. What can you say about the fuel situation in the area as it is at the present time? A. Fortunately for the Kansas City area, it got its start from the fact that it lies north of the mineral

resources of the state and not too far away from some of the coal mines—I will mention those for our friend over there in the corner.

Mr. John McGrath: Thank you.

The Witness: But the coal industry has not done too well in Missouri, unfortunately. At the present time industry is not primarily interested in using coal in the manufacturing processes.

By Mr. Seacat:

Q. Is all of the fuel used by industry in the way of coal and oil imported into the area? A. It is moved in from out in the state or neighboring states into the area.

Q. Mr. Jeffrey, in your judgment, based on your experience in the performance of your duties in connection with your employment, does this area in Clay County that we have been talking about, north and east of Kansas City, have available supplies of fuel such as well attract industrial management to that area for its plants and factories? A. I know of two instances where we were turned down in the consideration of the area because of lack of fuel.

Q. In the event, Mr. Jeffrey, that natural gas should be brought into Clay County in the area north and east of

Kansas City by pipe line in adequate quantities and adequate volumes to provide fuel for industries, in your judgment

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would there be a market for that gas in the area described? A. I could answer that positively yes.

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By Mr. Seacat:

Q. Mr. Jeffrey, viewing the matter of that locality from its resources and industrial standpoint, from your judgment based on your experience in this work, would the present and future public convenience and necessity be advanced and promoted by the provision of natural gas in volumes adequate for industrial use in the area heretofore referred to?

Mr. Littman: I object to that. That certainly calls for a legal conclusion.

2365

Presiding Examiner: I overrule the objection.

A. I would certainly answer yes.

By Mr. Seacat:

Q. Did you answer the question? A. I answered it yes.

Q. Furthermore, Mr. Jeffrey, in your judgment does the lack of an adequate supply of natural gas in that territory have a tendency to retard its development industrially?

Mr. Littman: I object to that. There has been no foundation here, no lack of gas shown on this record.

Presiding Examiner: The same ruling. It is overruled.

By Mr. Seacat:

Q. Did you answer the question? A. I don't know whether to give the names of the two companies last year——

Presiding Examiner: Do you want the question read, Mr. Jeffrey? It calls for an answer of yes or no, I think.

By Mr. Seacat:

Q. Go ahead and answer the quesitor.

Presiding Examiner: Read the question.

(Question read.)

A. Yes.

. . . . . .

2636

Presiding Examiner: In the matter of Panhandle Eastern Pipe Line Company, et al., Docket Nos. G-1705, et al., the hearing will come to order.

I have a letter in the files of the Commission, dated January 25, 1956, to the Chairman from the Minister of Trade and Commerce of Canada relative to the proposed exportation of gas to Canada.

It is not an uncommon practice for letters from public officials to be made a part of the record as a statement of position, and it would seem to be in order for this letter to be copied into the record.

Would any counsel desire to see it before it is copied?

Mr. John A. McGrath: Yes, sir.

Presiding Examiner: Very well. Let the record show I am handing it to counsel for inspection.

Mr. Shibley: Mr. Examiner, we have no objection to the letter going into the record.

Mr. Morley: As I understand, Mr. Examiner, from your statement, this letter will not be received as evidence but

simply, as you said, a statement of position and could not be relied on for any evidentiary purposes by yourself or the Commission.

Presiding Examiner: That is correct.

Mr. John A. McGrath: With that in mind, I have no

objection to it either, Mr. Examiner.

Presiding Examiner: Very well. Mr. Reporter, will you copy into the record the letter which I hand you.

Mr. John A. McGrath: I believe, Mr. Examiner, in the light of that letter, it might be interesting to relate the date on the letter to the facts that have taken place in Canada in he last recent weeks, namely, the date of the letter is January 25, and that within the last two or three weeks, Trans-Canada has notified the government at Ottawa, the Dominion government, that they will be unable to start construction this year because financing plans have broken down and they are unable to obtain financing from the government of Canada.

Perhaps due to the date of that letter, in the light of recent developments, Mr. Howe may have a different position than that.

Presiding Examiner: The date the letter was written appears on its face.

MINISTER OF TRADE AND COMMERCE

Canada
Ottawa January 25th, 1955.

Dear Mr. Kuykendall:

You will recall that during my visit to Washington last spring, we discussed the possibility of Canada obtaining interium supplies of natural gas from the United States. The

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use of this gas, which would be used for load building purposes in Eastern Canada, would be terminated when the main Trans-Canada pipeline was completed from Alberta to Southern Ontario and Quebec.

This is already happening in the Toronto area. United States gas transported through the Tennessee Gas Transmission system is now being used to develop the local market there. Now, the Panhandle Eastern Transmission Co., in collaboration with the Union Gas Co. of Canada, is applying to the Federal Power Commission for permission to export some 15.5 billion cu. ft. of gas a year into southwestern Ontario. I would like you to know that this joint Panhandle-Union proposal has the full support of my Government.

We have every reason to expect that the main Trans-Canada line will have been completed by the end of 1957. Thereafter, these exports of United States gas can be terminated without any inconvenience, either to the transporting companies in the United States or to our distributors in Eastern Canada. In fact, the various contracts between Tennessee Transmission and the Consumers' Gas Co. of Toronto, Panhandle Eastern and the Union Gas Co., and the Canadian companies with Trans-Canada, have all been drawn up and signed with this prospect in mind.

In view of our mutual interest in making the maximum use of our Canadian and United States natural gas resources,

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you will be interested to know, that, in negotiating their contractural agreements with distributors in southern Ontario and Quebec, Trans-Canada has been able, not only to meet or under-quote the price offerings of United States gas, but also to offer much larger volumes of gas in this part of the country. This being the case, you will under-

stand our desire to use United States gas for prior load building purposes and then to turn to our own more plentiful sources of supply once the main Trans-Canada line has been completed.

Yours sincerely,

(S.) C. D. Howe

Jerome K. Kuykendall, Esq.,
Chairman,
Federal Power Commission,
Washington, D. C., U. S. A.

2769

William L. Patterson

was called as a witness, having been first duly sworn, was examined and testified as follows:

2770

Direct examination

By Mr. Seacat:

Q. Please state your name and address, Mr. Patterson? A. William L. Patterson, 631 West 66th Terrace, Kansas City, Missouri.

2771

Q. By whom are you employed and what is your present position? A. I am a principal engineer with Black and Veatch, consulting engineers.

Q. They are located at Kansas City? A. Kansas City, Missouri.

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Q. Mr. Patterson, over the past year more or less at the request of the Central West Utility Company, have you

made studies of the Liberty Lateral and the facts and figures relating to the Liberty Lateral, particularly those in connection with the hearings in Docket No. G-1116 held before the Federal Power Commission in May and June 1954? A. Yes, I have.

Q. Did you testify in those hearings? A. I did.

Q. In the course of that investigation, did you ascertain what was the peak day delivery from the Liberty Lateral in the past? A. Yes. According to the testimony in those hearings, the peak day delivery occurred January 20, 1954, when a total of 16,311 Mcf of Panhandle gas was put into the Liberty Lateral at the Louisburg compressor station.

Q. Do you know the breakdown of that, or can you state for this record how this gas was distributed between customers along the lateral? A. The deliveries by Panhandle consisted of 5,249 Mcf to Central West Utility Company——

Presiding Examiner: Just a moment. Mr. Seacat, isn't that

2775

already in the record?

Mr. Seacat: That is in the record. It is a matter of inducement here to lead the testimony he will give.

Presiding Examiner: I don't think we need to have that over again.

Mr. Seacat: Let me sum it up this way.

By Mr. Seacat:

Q. Mr. Patterson, you stated a minute ago that the Panhandle gas end of the lateral was 16,611 Mcf on that date. A. 16,311 Mcf.

Q. Do you know from your investigation what the aggregate demands are on the lateral for 1954 and 1955 just in round figures? A. The total estimated in 1954-55 demands amount to 31,517 Mcf; and I believe that is also a figure that is in the record.

(2775)

Q. That is taken from the records here? A. That is right.

Q. Have you computed, Mr. Patterson, on that basis what the deficiency is in the lateral with respect to the delivery of Panhandle gas in comparison with the demand? A. The deficiency on the basis of the capacity stated and the estimated demands for 1954-55 is 15,206 Mcf.

Mr. Littman: May I ask Mr. Seacat a question?

Presiding Examiner: Yes.

2776

Mr. Littman: Do you exclude from the witness's consideration there the amount of gas available under the exchange agreement with the Cities Service Gas Company?

Mr. Seacat: No. I am talking about Panhandle gas alone. You have taken into consideration, have you not, the gas that was put into the line by Cities Service Gas Company at the exchange point?

The Witness: Yes, I have. That is net. Actually that is the gas to resale customers on the line, the net that would be put in and was put in by Panhandle at Louisburg compressor station.

Mr. Seacat: Does that satisfy your question, Mr. Littman?

Mr. Littman: I am still in doubt, but go ahead.

Presiding Examiner: It is not clear to me, Mr. Seacat. Do you or do you not consider, Mr. Witness, in that figure the exchange gas with the Cities Service people?

The Witness: Yes, I do. I can break that down to show how I take it into consideration, if you like.

Mr. Seacat: Let me put it this way, Mr. Examiner. That was omitted here when we tried to shorten the matter.

By Mr. Seacat:

Q. Mr. Patterson, in the course of this matter, you have become familiar with the fact, have you not, that there is

pending before this Commission an application of Panhandle Eastern Pipe Line Company to abandon service to Cities Service

2777

Company at at the exchange point? A. Yes, I am familiar with the fact.

Q. And an application to abandon service to Gas Service Company, but I am speaking about the Cities Service Gas Company. You are familiar with that? A. That is my understanding.

Q. In these computations and the studies that you have made here, are they predicated upon the proposition that there would be only Panhandle gas in the system for purposes of your calculation; that is, you eliminate from your calculation for this purpose the presence of the Cities Service gas? A. Yes, that is correct. The analysis and the figures that I am giving are based on the input of Panhandle gas at Louisburg.

Q. And on the assumption that Panhandle might prevail in the Cities Service Gas abandonment case. Isn't that true? A. Yes, that could be a part of it.

Q. Now then, with that assumption, Mr. Patterson——

Presiding Examiner: Then you do not consider the Cities Service exchange, do you, in your figures?

Mr. Seacat: We are understanding to do this, Mr. Examiner. We are undertaking to prove how we can put this lateral in shape to take care of the business on the lateral if, as Panhandle has in all their plans or all their proposals, they do win everything in sight—if I make myself clear.

2778

Mr. Littman: That may be so. I just wanted to be clear as to just what the assumptions were and what these figures represent.

Mr. Morley: It seems to me we should accept the witness's offer, Mr. Examiner; he said he would break down the figures. It would certainly be helpful to me.

Presiding Examiner: I think it would be helpful to the Examiner also. Will you proceed to break down your figures?

The Witness: The delivery on this peak day—and this is taken from the record, I believe, from Mr. Haeger's testimony—is 5,249 Mcf to Central West Utility Company; 2,892 Mcf to the Missouri Power and Light Company, with a total of 8,141 Mcf at the end of the lateral at Liberty.

Louisburg Gas Company received 501 Mcf, and Gas Service Company received 15,965 Mcf at or near Bannister exchange and through the Wilkins regulator.

These deliveries were possibly only because a total of 9,164 Mcf was received from the Cities Service Gas Company at or near the Bannister exchange point.

Taking into account the deliveries to the small line customers and allowing for losses totaling 868 Mcf, the total net delivery of Panhandle gas at the Louisburg compressor station was 16,311 Mcf.

By Mr. Seacat:

Q. Are the computations that you will state in a moment

based on the assumption that Panhandle gas only would serve through the lateral, or would be put through the latera' for service along the lateral? Is that correct? A. Yes, it is based on Panhandle gas only; and for the reason that all I am trying to do is set up what the experience capacity on the Panhandle lateral has been and arrived at the total of 16,311 as an historical capacity at the Louisburg compressor station.

Mr. Littman: If I may interrupt there just one minute.

So that the so-called deficiency which you have named of 15,206 Mef is the deficiency arrived at without any consideration of any gas being taken into the system from the Cities Service Gas Company?

The Witness: That is correct.

Mr. Littman: That straightens me out.

By Mr. Seacat:

Q. Now, on that assumption, Mr. Patterson, have you made studies to ascertain from an engineering standpoint what improvements might or could be made to the Liberty lateral——

Mr. Littman: Pardon me, may I have that question read?

Presiding Examiner: Read it down as far as you have gone. It has not been finished.

(Question read.)

By Mr. Seacat:

Q. —which would eliminate that deficiency?

A. Yes, I have.

Mr. Seacat: I have a drawing here, Mr. Examiner, which I would like to have marked as an exhibit. Could we have a number for it, please?

Presiding Examiner: Exhibit 128 is the next number for identification. Will you state for the record a description of the exhibit which you offer as 128?

Mr. Seacat: Yes. This is a one-sheet exhibit, a diagram entitled, "Liberty Lateral Improvements with New 10-inch Supply and 10-inch Loop."

Presiding Examiner: Exhibit 128 for identification.

(The above mentioned document was marked for identification as Exhibit No. 128.)

By Mr. Seacat:

Q. Mr. Patterson, do you have before you Exhibit 128 for identification which has just been described? A. Yes, I do.

Q. Did you prepare that exhibit to illustrate your testimony here? A. Yes, it was prepared by my staff and under my supervision.

Q. Is it submitted here now as portraying your determination of what might be done with the Liberty Lateral to correct the deficiency you have spoken off? A. Yes, it is.

2781

Q. With that background and basis, would you describe what it is you have undertaken to show by the exhibit?

Mr. Littman: Mr. Examiner, I will undoubtedly want to interpose some objections. I think I know what is coming, but the question is rather broad and general. I don't want to be deemed to have waived my right to object to any new construction that is involved. I believe there is new construction involved here.

May I therefore ask that any objections I may have not be waived until after this witness has given the answer, at which time I might want to move to strike. I don't want to interrupt the orderly presentation here.

Presiding Examiner: It may be so understood.

By Mr. Seacat:

Q. Go ahead, Mr. Patterson, and explain the exhibit.

Presiding Examiner: You have stated your question once. Do you want th question read, Mr. Witness?

The Witness: No, sir. I can go ahead.

A. The exhibit shows improvements to the line consisting of a new 10-inch line from Panhandle's main line near Harrisonville to the Unity Farm, which is marked on the

sketch and is at the junction of the 10 inch and 8-inch existing lateral. It also indicates a 10-inch loop of the 4.8 miles of 6-inch line near Liberty.

To illustrate the amount of additional capacity provided

2782

by these proposed improvements, two conditions of flow have been illustrated, first as Case 1 and the other as Case 2.

Case 1 shows the capacity of the line based upon a take-out of 20,000 Mcf of gas at Unity Farm Junction with the balance of the capacity available from the new 10-inch line from Harrisonville carried on to Liberty.

. . . . . .

Mr. Littman: It is clearly shown, Mr. Examiner, now from what the witness has testified and from the face of this exhibit that Central West proposes that Panhandle be required to construct a new pipe line consisting of 19 miles of 10-inch pipe, as the witness has stated, running from Harrisonville northward to a point called the Unity Farm Junction.

From that point on, 16.5 miles of 8-inch pipe that runs on up from that point is the old line. Then up near the north end of this sketch it is clear from the witness's testimony that it is proposed that we be compelled to construct 4.8 miles of 10-inch line to loop the existing 6-inch line just south of Liberty.

2783

The reasons for our objections to any further testimony regarding this exhibit, and specifically that the testimony thus far given be stricken, may be stated briefly as follows.

The Court of Appeals for the Third Circuit on April 30, 1953, handed down an opinion, to which I alluded when I was here a few weeks ago at the former session, in 204,

Fed. 2d, 675, which was an appeal from an order issued by the Federal Power Commission.

The case in that court was entitled, "Panhandle Eastern Pipe Line Company, Petitioner, v. Federal Power Commission," there being two cases, namely, Nos. 10,639 and 10,761.

I am sure your Honor is familiar generally with those appeals and with the orders of the court remanding the Commission's order back to this Commission for further hearing in accordance with the remand. And of course Mr. Examiner Law is now in the process, I think, of writing his initial decision on the subject.

Presiding Examiner: I have read those court cases.

Mr. Littman: But I do want to point up the basis of my objection by some very short quotes from those opinions so as to bring the matter perhaps a little more sharply into focus.

The witness, your Honor will note, used the term "improvements." He is suggesting that we be required to construct certain improvements in this system.

The Court said in its opinion—Judge Maris writing for

the majority:

> "An order under Section 5-A directing a pipe line company to deliver more gas than its system has capacity to transport has the inescapable effect of compelling the company to improve its system by its enlargement to the extent necessary to carry the amount of gas required; for to improve is to augment or enhance in quality as well as quantity. Such an order is, therefore, the equivalent of an order for the improvement of transportation facilities by their enlargement and, as such, is expressly within the band of the proviso of Section 7-A."

A little further on down at the end of that same paragraph the court said:

> "In the light of Section 7-A we are compelled to conclude that Congress meant to leave the question whether to employ additional capital in the enlargement of its pipe line facilities to the unfettered judgment of the stockholders and directors of each natural gas company involved."

On re-hearing before the court, the court issued a short further opinion in which it reaffirmed the same principles which I have read, stating—and here is another very brief quote:

> "We adhere, however, to the view expressed

> in the opinion of the court heretofore filed that the Commission is prohibited by the proviso in Section 7-A from directing an improvement of the transportation facilities of a natural gas company which involves the enlargement of those transportation facilities, even though the purpose is to enable the delivery of more gas in order to eliminate undue discrimination between customers."

Now, Mr. Examiner, it is very clear that the purpose of this Exhibit No. 128 is to require Panhandle to improve its system by constructing these new facilities for the purpose of enlarging the capacity of this particular Liberty Lateral system. About that there can be no doubt.

Panhandle has not offered in this proceeding any certificate to make any such enlargement. It has exercised its own discretion, its managerial discretion; and it has clearly indicated that it is not desirous of investing this money in this sort of construction.

2799

William L. Patterson

was recalled as a witness,

. . . . . .

Direct examination (Resumed)

By Mr. Seacat:

Q. Mr. Patterson, at the close of yesterday's proceeding, as I remember it, you were explaining to the Examiner and for the record, the sketch that you made that has been identified here as Exhibit No. 128.

Would you proceed? Can you pick up where you left off on that explanation and proceed with it? A. Yes, I can.

Q. It might be well to go back and catch up to that point so the record will be complete.

2800

A. I was explaining what the Exhibit 128 shows and had mentioned that it included a ten-inch line from Panhandle's main line near Harrisonville to what we have designated as the Unity Farm Junction, which is the start of the 8-inch line going north.

It also includes a ten-inch loop of the six-inch line near Liberty.

The Exhibit illustrates two conditions, a Case 1 and a Case 2.

Case 1 shows the capacity of the line based upon a take-out of 20,000 Mcf of gas at Unity Farm Junction with the balance of the capacity available from the new ten-inch line from Harrisonville carried on to Liberty.

This case assumes no delivery from the old ten-inch lateral into the eight-inch lateral north of Unity Farm Junction.

Case 2 illustrated also, assumes no delivery from the old

ten-inch lateral into the eight-inch north of Unity Farm Junction, and aso assumes no delivery into the old ten-inch lateral from the proposed new ten-inch line.

This case shows the capacity of the combined new and existing lines from Harrisonville to Liberty.

With the 500 pound per square inch inlet pressure at Harrisonville, this exhibit shows first for Case 1 that with a 20,000 Mcf delivery at Unity Farm Junction, and with a terminal pressure of 88 pounds per square inch at Liberty,

2801

that the input at Harrisonville would amount to 38,500 Mcf, of which approximately 18,500 Mcf would be available at Liberty.

This new ten-inch line would supply more Panhandle gas than has been previously available from the old ten-inch portion of the Liberty lateral, and also would supply ample gas for Central West Utility Company and Missouri Power and Light Company for their apparent requirements in the Clay County area for sometime in the future.

Q. Let me interrupt, Mr. Patterson, to ask you one or two questions. Under your Case 1 with the 20,000 Mcf delivery into the ten-inch east-west line, do I understand it correctly that, if necessary, that would be ample as of now to take care of all the requirements down to Louisburg? A. Yes. I chose the 20,000 simply because it is in excess of the requirements that had been indicated. What I am trying to do in setting up the two cases is not set up any particular operating condition but to show two rather outside examples in that the 20,000 would be considerable take-out at the Unity Farm Junction and in excess of experience to date, and the other Case would show what could be delivered as a maximum condition to Clay County.

Q. Is it your understanding from the record, there would be 500 pounds available at Harrisonville? A. Yes, that is correct.

Q. And the 88 pounds terminal pressure came from

2802

what source? A. I believe that 88 pounds is from one of Panhandle's exhibits, No. 612 in G-1116.

Q. That would be a feasible operating pressure for distribution at Liberty, would it? A. Yes. It is my understanding from Missouri Power and Light that that is about as low a pressure as they can use to obtain delivery at Excelsior Springs.

Q. What would be the result, Mr. Patterson, if the existing lateral from the Louisburg compressor station were to remain in service while the proposed ten-inch supply line from Harrisonville was serving under the conditions outlined in Case No. 1? A. If we assume the same operating conditions which have existed on the lateral, the capacity available from Louisburg in the old ten-inch portion of the lateral would be at least over 16,000 Mcf. If more capacity were required on the ten-inch portion of the lateral, as Exhibit 128 indicates, an additional availability under Case 1 of up to 20,000 Mcf would be available.

So that in excess of 30,000 Mcf would be available in the vicinity of Bannister Exchange.

Q. Let me ask you there, Mr. Patterson: You are now speaking in terms of Panhandle gas exclusive of the lateral?

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A. Yes, I am.

Q. Proceed. A. Obviously if the demands were lesser on the portion of the old ten inch part of the lateral, it is possible that portions of the lateral might be abandoned or limited service might be continued at a reduced pressure.

The availability of gas from the proposed ten-inch supply line would assist in realizing this, and the fact that the Clay County load would be assumed by the new supply

would also contribute to relieving the older and weaker portions of the existing lateral.

Q. Assuming then, Mr. Patterson, that the older parts of the lateral are now providing a bottleneck because of a condition that will not withstand higher pressures, would this plan that you are suggesting here relieve that condition? A. It would relieve it in the two ways that were noted. First, in supplying gas at the upper end near Unity Farm from the east or at that point to reduce the flow from Louisburg, and also to relieve the Louisburg portion of the line, the state line portion, of any of the Clay County load.

Q. If the existing loads on the old ten-inch Liberty lateral could continue to be supplied from the present lateral through Louisburg and the proposed ten-inch supply line as described and shown in Exhibit 128 were utilized to supply

2804

loads north of Unity Farm Junction, but with no supply to the old ten-inch lateral, how much gas would be supplied at Liberty? A. My calculations show that the supply available through the proposed ten-inch line from Harrisonville to Unity Farm Junction and available at Liberty, would amount to 24,850 Mcf. This is the Case 2 shown on Exhibit 128.

Q. By that you mean that the new supply out of Harrisonville would be used exclusively at Liberty, and the rest of the system would be supplied out of Louisburg. Is that right? A. That is right. That is shown as illustrating that condition.

Q. Have you in this connection, Mr. Patterson, made any estimates of the approximate cost of the improvements which you have described? A. Yes, I have.

Q. Would you state what those estimates are, please? A. I have prepared estimates of cost and these must be

considered approximate due to the fact that the estimates are made without the benefit of detailed surveys or plans.

But, bearing that in mind, the total cost of the ten-inch supply line from Harrisonville to the Unity Farm Junction is estimated as $494,000. The cost of the ten-inch loop from the beginning of the six-inch line to Liberty is

2805

estimated at $125,000.

The total improvements as shown on Exhibit 128 are estimated to cost approximately $619,000.

Q. Mr. Patterson, are you familiar with the terrain between Unity Farm Junction as we have called it here, and Panhandle's pipeline near Harrisonville? A. Yes, in general, I am. I have been over that area a number of times and I am familiar with the nature of it.

Q. Is there anything in that area in the terrain that would present unusual conditions for the construction of a pipeline? A. No, not unusual.

Q. In your judgment are these estimates fair and reasonable according to your experience in constructing pipelines of this character? A. I think the estimates are a little conservative, and I think reasonable, in fact, as near as we could estimate such a pipeline, and we do have to make estimates of this nature.

Presiding Examiner: What do you mean by "conservative"? A little too low or a little too high?

The Witness: By "conservative" I mean a little on the high side, if anything.

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By Mr. Seacat:

Q. As matters stand now, Mr. Patterson, is there some measure of bottleneck involved in the six-inch line at Liberty? That is, is it too small to meet the demand that is now required up there? A. The six-inch line near Liberty is the worst bottleneck in the supply of gas to Clay

County. The loss in that portion of the line is far greater than in the other portions.

Q. The loss of pressure? A. The loss of pressure.

Q. This suggestion you have here was designed to remove that bottleneck also? A. That is right. That is probably the number one requirement.

Q. Can you state, Mr. Patterson, or have you made an examination of the record enough to enable you to state how this cost of $619,000 compares with the estimated cost of improving the other laterals which are included in Panhandle's expansion program?

Can you make a comparison of the two? A. Yes, I am familiar with what was presented on the other laterals and a comparison can be made on the basis of a common denominator in the respect that the cost per Mcf of increased capacity provided can be compared.

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The maximum present capacity of existing lateral as indicated by the peak day delivery on January 20, 1954, has been shown to be 16,311 Mcf. The capacity of the improved line as estimated would be not less than 38,500 Mcf, and hence the increase in capacity due to the improvements would be 22,189 Mcf.

Mr. Littman: May I interrupt there to clear up a point?

Presiding Examiner: Yes.

Mr. Littman: You say not less than 28,500 Mcf. You mean not more than 38,500 Mcf, don't you? That is your Case 1. Your Case 2 is 24,850. Will you clear me up on it?

The Witness: Yes, in this respect, that if we made the comparison on the basis of Case 2, the increase in capacity would be greater because in Case 2 the increase in capacity would be at least the 24,850 because the original capacity of the lateral would still be in effect.

So I have chosen the lesser of the two to make the comparison.

Mr. Littman: You are speaking then in terms of increased capacity as far as Liberty is concerned?

The Witness: Well, for the whole lateral.

By Mr. Seacat:

Q. You have made the computation for the whole lateral under Case 1 and for the Liberty end of it in Case 2. Isn't

2808

that correct? A. No. I have made calculations both ways, but the ones I am talking about here, the illustration I have given, is on Case 1. If we make the comparison on the basis of Case 2, which would take into account the capacity of the lateral in its entirety, then the difference, the increase, would be 24,850 according to these calculations, which is in excess of the 22,189. That is the reason the statement is made as I just gave it.

Q. What is your average cost per Mcf of increase under Case 1, Mr. Patterson? A. Based on the total improvement costs estimated at $619,000, the cost per Mcf of increased capacity would be $27.90, which is approximately 78 percent of the average cost of the increased capacity of the laterals proposed by Panhandle, which average was $35.84.

Q. Have you also made a calculation, Mr. Patterson, of the average cost per Mcf of increased capacity on the basis of the difference between the present capacity of the estimated lateral and the current demands thereon? A. The estimated total peak day load for the lateral for the 1954-1955 heating season is 31,517 Mcf, and this total is 17,206 Mcf greater than the existing capacity as measured by the peak day delivery of January 20, 1954. Based upon the deficiency of 15,206 Mcf in capacity under

2809

estimated demands, the cost per Mcf of increase to meet those demands would be $40.71 per Mcf, or 13-6/10 percent

more than the average cost of laterals proposed by Panhandle, but materially less than the cost per Mcf of added capacity of the Peoria, Clinton, Arthur, Villa Grove, or the Greenfield laterals.

Q. Those calculations or those statements you have just made are based upon an examination, are they not, Mr. Patterson, of the exhibits and cost data that are connected with those laterals in the present improvement program of Panhandle? A. That is correct.

Presiding Examiner: And in the present record?

Mr. Seacat: In the present record, yes.

The Witness: Yes, sir.

By Mr. Seacat:

Q. Did you ever state the cost per Mcf of increase under your Case 2? A. Yes, I did. I beg your pardon, I don't know whether I stated it or not. I think I did. I have it here.

Under Case 2, with an additional capacity of 24,850 Mcf since the input at Louisburg, it would be at least as much on the old line as the existing peak day has recorded. We can use the 24,850 as a measure of increase.

Based on that and the $619,000 total construction estimated cost, the cost per Mcf would be $24.91 on that.

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basis.

Q. On Case 2? A. On Case 2.

* * * * * * * * * *

2822

Walter Vaughn

was called as a witness, having been first duly sworn, was examined and testified as follows:

Direct examination

By Mr. Woods:

Q. Will you state your name for the record, please? A. My name is Walter Vaughn.

Q. Where do you live, Mr. Vaughn? A. 635 Huntington Road, Kansas City, Missouri.

Q. What is your occupation or business? A. I am secretary of Stern Brothers and Company, and a vice president of Central West Utility Company.

Q. For how long have you been an officer of Central West Utility Company? A. I first became treasurer of Central West Utility Company in October 1939. I remained an officer until early in 1943, when I was away from the organization for a couple of years, and came back as vice president and a member of the board of directors in 1945.

Q. As a member of the board of directors of Central West and its vice president, have you been active in its

management and in the formulation of its policy for operation and the general conduct of its business? A. I have. One of my duties in connection with Stern Brothers and Company, which has an interest in Central West Utility Company, is to keep in touch with the actual affairs and management of Central West Utility Company and to generally aid in the supervision of the operations of that company.

Mr. Walsh: What is Stern Brothers?

The Witness: Stern Brothers is an investment banking company located at Kansas City.

By Mr. Woods:

Q. Mr. Vaughn, are you familiar with what is at present and what has for the last, say, six or seven years been Central West's source of supply of natural gas for the

Clay County, Missouri, area? A. Yes, I am.

Q. What has been that source of supply? A. Central West Utility Company has had as a sole source of supply for its gas in the Clay County, Missouri, area, the Panhandle Eastern Pipe Line Company.

Q. Has that always been true? A. No. The original contract with Panhandle Eastern Pipe Line Company was made in January 1936. Prior to that time, the distribution system had been served by local gas

from shallow wells in Clay County, Missouri. These wells gradually dwindled, and it became apparent that in order for the company to continue, it would have to have an assured source of supply.

A contract was made, as I said, in January 1936, to run for a period of ten years. Central West was required under the contract to take from Panhandle at least 75 percent of its requirements. The other 25 percent, of course, was to take care of the dwindling supply of local gas until that supply was exhausted.

It was exhausted soon after, roughly around the early forties—1941 or 1942—Central West was using only pipeline gas and continued to do so thereafter.

Mr. Woods: Mr. Examiner, may I request that this document, the same being a graph showing peak day purchases by Central West from Panhandle, be assigned an exhibit number for identification?

Presiding Examiner: Exhibit 129 for identification.

(The Document above referred to was marked as Exhibit No. 129, for identification.)

Mr. Woods: If the Examiner please, copies of this exhibit have already been given to Panhandle, the Staff and to the reporter.

By Mr. Woods:

Q. Directing your attention to what has been marked as

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Exhibit 129 for identification, I will ask you to state whether or not you had anything to do with the preparation of that exhibit? A. Yes. This exhibit was made in the office of Central West Utility Company and under my general supervision and from figures that are records of Central West and under my control and general management.

Q. Would you explain in general what is shown by Exhibit 129? A. This is a graph showing the actual peak days during the heating seasons of years from 1943 up to 1951, showing actual peak day purchases by Central West from Panhandle and also showing figures converting those peak day purchases to the supposed purchases had the temperatures been at zero degree on those days.

Q. I notice that Exhibit 129 shows that in 1941 the highest purchase of gas from Panhnadle shown on that exhibit was reached in the amount of 7,741 Mcf. Can you state the reason for the decline in the purchases of gas from P. handle by Central West following that day in 1951, December, I believe it is? A. February 1, 1951.

Q. February 1, 1951. A. As you can see from the chart, the figures reflect the growth of Central West over the period, and the increasing

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use of Panhandle gas. It became apparent shortly after the war that the growth of our territory was such that we would need more gas from Panhandle. We made various efforts to obtain it.

Presiding Examiner: You mean after World War II?

The Witness: After World War II.

It was an era of allocations and restrictions. There were shortages of pipe and labor as well as gas. There were allocations of all kinds. We thought perhaps our situation was similar to the situation of other distributors, but we soon found out that we were being set aside by Panhandle and would be in a position where we could not get our requirements from Panhandle.

We went along under allocations through these various years until we reached this peak in 1951 and ran out of gas. Our customers were without gas on a cold morning and suffered, and our public relations became impaired.

It became necessary at that time to dispose of about two-thirds of our customers in the Clay County distribution area and to reduce our distributing system.

Q. Was that the cause for the drop in peak day purchases by Central West? A. That was the cause for the drop in the peak purchases back to 4443 Mcf in the 1953 heating period.

Q. Are you familiar with the territory certificated

to Central West Utility Company in Clay County, Missouri, by the Missouri Public Service Commission? A. I am.

Q. Directing your attention to what has been introduced in evidence as Exhibit 113, I will ask you to state for the record just generally the extent of and boundaries of Central West's certificated territory in Clay County, Missouri? A. This territory is an irregular area of approximately ten miles long and two miles wide extending from the northerly edge of Liberty, Missouri, southwestward to the northern boundary of Kansas City North.

Mr. Littman: Mr. Examiner, isn't that all shown here on the map by legend?

Presiding Examiner: Just a moment, Mr. Witness, there

has been an objection, or at least an inquiry made. What do you say as to that, Mr. Woods? Is this necessary?

Mr. Woods: I just wanted him to tie into this exhibit.

Presiding Examiner: Couldn't you cut it down and shorten it?

Mr. Woods: I think I can, Mr. Examiner.

By Mr. Woods:

Q. Mr. Vaughn, is the area included within the blue-hatched lines on Exhibit No. 113 and designated Central West Utility Company's certificated territory, the area to which you refer?

A. It is.

Q. Have there been any changes in that certificated territory since 1950, to your knowledge? A. Yes.

Q. What, if any, have been those changes? A. About 19.7 square miles of our territory was ceded to The Gas Service Company in 1951. That territory was the area annexed by the City of Kansas City, Missouri, a few months before that time—I believe in 1950.

Q. With reference to Exhibit 113, would you describe that territory about which you have been testifying and which was ceded to Gas Service Company? A. That territory is the area marked here as Kansas City North. It extends down to the city limits of North Kansas City and also includes the Village of Avondale.

Mr. Woods: If the Examiner please, may I request that a map designated Central West Utility Company, Clay County territory, be assigned an exhibit number for identification?

Presiding Examiner: Exhibit 130 for identification.

(The document above referred to was marked as Exhibit No. 130, for identification.)

By Mr. Woods:

Q. Directing your attention, Mr. Vaughn, to what has been marked as Exhibit 130 for identification, I ask you if you had any part in the preparation of that exhibit?

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A. I did.

Q. Would you describe what is shown by the exhibit?

Mr. Walsh: May I ask what part did you have in the preparation of this exhibit?

The Witness: This exhibit was made in the office of Central West Utility Company under the general supervision of the officers of Central West Utility Company, of which I am one.

Mr. Littman: May I ask you the time of its preparation?

The Witness: My recollection is that it was within the last six months.

Mr. Littman: Was it copied from something else, or had it been earlier prepared, do you know?

The Witness: That I don't know.

Mr. Littman: It looks like an old familiar face to me.

Mr. Woods: It is, Mr. Littman. It was copied from a previous exhibit, as you are aware.

Mr. Littman: A rather old one.

By Mr. Woods:

Q. Would you state what is purported to be shown by what has been marked Exhibit 130 for identification, Mr. Vaughn? A. The area colored in red is the present certificated area of the Central West Utility system in Clay County. The area marked in blue is that which was ceded to

2830

The Gas Service Company in 1951. The area colored in green was an area certificated to Central West Utility

Company by the Missouri Public Service Commission in, I believe, 1948.

There was a growth of residential areas along Highway No. 169 through this area and it appeared that it would be feasible for Central West to serve that area. We were given a certificate and made studies.

We determined that because of the lack of our supply of gas from Panhandle, the shortage of gas from Panhandle, that it would not be safe for us to go into that area, and the Missouri Public Service Commission failed to renew our certificate in 1950.

Q. Can you state from your knowldege whether recently that territory has been certificated to Gas Service Company by the Missouri Public Service Commission? A. It has. Within the past few months The Gas Service Company applied for a certificate and received a certificate to serve that area running a line north from the blue area across our area into the green area, which they are not certificated to serve.

Q. Have there been any other annexation changes by Kansas City, Missouri, since the one that led to the cession to Gas Service Company of that area shown in blue on Exhibit 130 for identification? A. Yes, there has been.

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Q. Can you state just generally with reference to Exhibit 130 whether or not those annexed territories of Kansas City, Missouri, will include a portion of the territory presently certificated to Central West Utility Company? A. It will.

Q. Can you say generally what portion of the presently certificated area will be included in that Kansas City, Missouri, annexation? A. Generally all of the balance of the western portion of our certificated area over to the boundary of the City of Liberty and the Village of Claycomo.

Q. For the record, that annexation, while legally completed at this time, will become effective in 1959. Is that correct? A. That's right.

Q. Would you in general describe the general character of the development that is taking place at the present time in your—by that I mean Central West's—certificated territory? Is it residential or industrial? A. This area is developing very rapidly as a residential suburban area to Kansas City. The terrain itself is ideal. It is rolling, it is wooded. As a consequence, building developers, home developers, are going in there and building in large numbers all through this area. Not only

north of Kansas City, but also within the environs of Liberty. That city is growing rapidly as well. There are industries coming into the area and around the area.

It is accessible not only to the center of Kansas City across the existing bridges, but across new bridges which are now being built, three in number, across the river. It is accessible to the new International Airport that is being built directly to the west of the area in Platte County.

It is far enough away from that airport so that workers there will be away from the port if they own homes in this area. It has the advantage of being far enough removed from the airport to be well-located so far as that is concerned.

Q. At the present time approximately how many customers does Central West have in that territory? A. Approximately 3200.

Mr. Vaughn, can you state what the peak day purchase of gas from Panhandle was in this last heating season? A. The peak day occurred on February 10, 1955, and amounted to 6173 Mcf.

Q. Mr. Vaughn, going back, in the period between the

early 1940's and the present, has Central West ever experienced any difficulty with shortages or outages of gas purchased from Panhnadle Eastern Pipe Line Company? A. Definitely.

Mr. Littman: May I have that question read back, Mr.

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Examiner?

Presiding Examiner: Read it.

(Question read.)

The Witness: Shortages began to appear as early as 1945 or 1946. There were no actual interruptions until probably 1950 or 1951, but pressures on cold days were reduced considerably and it became a source of anxiety to us as to whether we could serve our customers in the coldest days that we might have.

By Mr. Woods:

Q. Did Central West make any efforts to obtain more gas from Panhandle Eastern, commencing along about 1945 or 1943? A. That is right. With the growth of our territory we received requests continually from builders, developers, as well as industrial organizations, for a supply of gas. In 1946, William Jewell College, located in Liberty, asked us for a supply of gas for space heating on an interruptible basis. We took the request to Panhandle and they declined to sell us the gas for that purpose and we turned down that business.

Mr. Littman: Will you fix the time there?

The Witness: 1946.

By Mr. Woods:

Q. Following that incident you have related, were

there opportunities for Central West Utility Company to sell gas to industrial concerns, and if so, would you please enumerate those? A. There were. In April 1948, the Great Lakes Pipe Line Company built a compressor station near our area and came to us for a supply of gas for that station. We again applied to Panhandle to see if they would sell us the gas for resale. They replied at that time that there were problems. There were hearings before the Federal Power Commission, and that they didn't feel that they could sell us the gas for that purpose.

Q. Incidentally, do you recall what the estimated requirements of that customer were? A. About 180,000 Mcf a day.

Mr. Seacat: Mcf or cubic feet? Not 180,000 Mcf, was it?

The Witness: 7½ Mcf an hour.

Mr. Woods: That would be approximately 180 a day, wouldn't it?

The Witness: 180 Mcf a day, excuse me.

By Mr. Woods:

Q. What other opportunities did Central West have to sell industrial gas during that period after this one you have related on the Great Lakes Pipe Line Company? A. In 1950 we received a visit from a representative of the Wabash Railroad Company telling us that a large

industry was coming into our territory near the Village of Claycomo and would want a large supply of gas.

The name was not divulged immediately, but we did immediately contact Panhandle Eastern Pipe Line Company to see if they would cooperate with us in furnishing gas to this prospective load.

Q. May I interrupt you there. Prior to that had you made any requests to Panhandle for an increased supply

of gas? A. Yes, early in 1950 we made a general request in a letter to Panhandle.

Q. What was the result of that request? A. Later on Panhandle within a short time replied to the effect that it would be an uneconomical outlay of funds to supply additional service, additional quantities of gas to us on the 62-mile Liberty lateral.

Q. Would you continue with what you were relating before I interrupted you? A. Our request met with no response so far as the new industrial load in Claycomo was concerned until after a matter of a few weeks, perhaps a month. The information came out in the newspapers in Kansas City that the——

Mr. Littman: Just a minute, I am going to object, Mr. Examiner. I think we can at least stay out of the newspapers in telling this story.

Presiding Examiner: I think the objection is well taken.

By Mr. Woods:

Q. Tell what you yourself know about it, Mr. Vaughn. A. It became known that the company was the Ford Motor Company. It was planning to come into our area. It also became known at that time that they were negotiating for a supply of gas from The Gas Service Company, and that was in spite of the fact that their location would be within our certificates area.

We made other appeals to the Panhandle Eastern Pipe Line Company, but they ignored our letters, and The Gas Service Company went to the Missouri Public Service Commission with a request to invade our territory, run a line to the Ford Motor Company, and serve the company directly themselves.

We were put in the position of great pressure by the Chamber of Commerce of Kansas City, by industrial

leaders, by the newspaper. We were in the position of being a dog in the manger. We were unable to serve the company and were preventing another utility from coming in.

As a result of that, the Missouri Commission finally gave The Gas Service Company permission to serve that industry.

Q. Which was within your territory? A. Which was within our territory and has continued to be surrounded by our territory.

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Presiding Examiner: Mr. Woods, would this be a convenient time for a recess?

Mr. Woods: Yes, sir, Mr. Examiner.

Presiding Examiner: We will be in recess for ten minutes.

(Whereupon, at 11:18 a. m. the hearing was recessed until 11:28 a. m.)

Presiding Examiner: Please come to order.

By Mr. Woods:

Q. Just prior to the recess, Mr. Vaughn, you were testifying about the Ford plant which was located in your territory in the vicinity of Claycomo, Missouri. In the discussions of the gas requirments for that plant, did the Ford Company indicate anything about from whom it wanted to obtain that supply of gas? A. No, they never expressed any preference. They wanted gas from whomever could supply it. Since they were in our certificated area, they approached us first and then went elsewhere when we couldn't produce it.

Q. Was the location of the plant in that particular territory conditionally upon an adequate supply of gas being available? A. It was. And there was considerable discussion of the possibility of the Ford plant leaving the entire Kansas City area if they did not——

Mr. Littman: Mr. Examiner, I am going to object to this.

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I would like to know who talked to whom. There is no evidence here that this witness talked to anybody.

I don't think we ought to have a lot of conclusions about "there were discussions."

Presiding Examiner: Mr. Woods, can't you lay a foundation?

Mr. Woods: Yes, Mr. Examiner.

By Mr. Woods:

Q. Were there discussions between representatives of the Ford Motor Company and representatives of Central West Utility, Mr. Vaughn? A. There were.

Q. Where did those discussions take place? A. I believe in the office of Central West or in the office of counsel for Central West.

Presiding Examiner: And when?

By Mr. Woods:

Q. Do you know whether or not there were any discussions with the Ford Motor Company representatives in Detroit, Michigan? A. Yes. Counsel for Central West made a trip to Detroit, Michigan, to see them.

Q. Were you present at the conferences in Detroit, Michigan? A. No.

Q. Did you subsequent to those conferences, confer with

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counsel for your company who had been there? A. I did.

Mr. Walsh: What counsel was that, Mr. Seacat or Mr. Woods?

The Witness: Neither.

By Mr. Woods:

Q. Who was counsel who represented the company in those meetings? A. Mr. Robert Reed, to my recollection.

Q. Did you as an officer of the company confer with Mr. Reed, both prior to and subsequent to those meetings? A. I participated in conferences in connection with his negotiations.

Presiding Examiner: Mr. Woods, can you fix the approximate time you are inquiring about?

Mr. Woods: Yes, sir.

By Mr. Woods:

Q. Would you state the approximate time when these meetings between representatives of Central West and the Motor Company took place? A. In the summer of 1950, probably in August or September.

Q. Did those conferences extend over a period of several months? A. They did.

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Mr. Littman: Mr. Examiner, in view of the witness' statement, it is apparent he did not take any part in these conversations. I am going to ask that his testimony regarding the discussions with the Ford Motor Company be stricken. I had no indication when the question was asked as to just what would come forth from this witness on the subject.

All that came forth, apparently, was a lot of hearsay. I am going to ask that it all be stricken.

Presiding Examiner: Is it correct, Mr. Vaughn, that you were not present at any of these discussions?

The Witness: I was not present in discussions with the Ford Motor Company representatives. I was present in discussions with counsel of Central West Utility Company who had talked with representatives of the Ford Motor Company.

Presiding Examiner: Motion to strike is granted. We need to identify just what is being stricken. Do you think that is clear enough, Mr. Littman, as to what is being stricken?

Mr. Littman: I think it is, as long as your ruling is that you are striking all the testimony of this witness with respect to discussions with the Ford Motor Company and conclusions drawn from that.

Mr. Seacat: Mr. Examiner, does that strike the fact that there were discussions?

Presiding Examiner: No, sir. It strikes the fact as to what was said at these discussions or conclusions or

inference of this witness as to what was said.

By Mr. Woods:

Q. Mr. Vaughn, what finally happened about the Ford plant so far as supplying it with gas is concerned?

Mr. Walsh: Mr. Examiner, I think that question is repetitive. I think we already have evidence that Gas Service Company furnished the service to the Ford Motor plant.

Presiding Examiner: Do you withdraw the question?

Mr. Woods: I withdraw the question.

By Mr. Woods:

Q. Did Central West have any other requests for a supply of industrial gas in or near its territory during the year 1950?

Mr. Littman: May I ask, Mr. Examiner, that question is very broad. I don't know how to object to it other than to ask your Honor to ask the witness to confine his testimony to what he actually knows of his own personal knowledge, either by conversations in which he personally participated, or in correspondence that came to his company in

an official way and to his attention in an official capacity.

For instance, I don't think this witness can testify regarding matters that have been told him by others or what he read in the newspapers and what not.

Presiding Examiner: Will you so confine your testimony, Mr. Vaughn. The statement of Counsel for Panhandle Eastern

is proper and reasonable and in accordance with the rules of evidence.

Mr. Woods: Would you like the question repeated?

The Witness: Yes.

Mr. Woods: Would you repeat the question, Mr. Reporter?

(Question read.)

A. I know from my own association with Central West that it received a letter in 1950 from an REA plant on the north bank of the Missouri River for a request for service, a power plant known as the Northwest Electric Power Cooperative, stating that they might use nine or ten thousand feet a day and asking for an interruptible contract, and that we were unable to grant them that contract. We lost that business.

By Mr. Woods:

Q. What was the request so far as quantity was concerned of the estimate of the demands of this cooperative power plant? A. The engineers' estimate was 10,000 Mcf a day.

Q. Was Central West able to serve that industry? A. No.

Mr. Littman: Just a minute. May I clear something up, Mr. Examiner. A moment ago the witness talked about 7- or 8,000 cubic feet. Then later on he spoke of 10,000 Mcf.

Which is it?

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By Mr. Woods:

Q. What was the quantity again? I think you are right, Mr. Littman. A. 10,000 Mcf.

Q. 10 million cubic feet a day? A. 10,000 Mcf per day on an interruptible basis.

Mr. Seacat: That is the Northwest Electric Cooperative?

The Witness: That is right.

By Mr. Woods:

Q. Mr. Vaughn, a little while ago you adverted to the portion of Central West certificated territory that was ceded to Gas Service Company in the year 1951. I will ask you to state first the reason that was ceded to Gas Service Company, and to explain the reasons therefor. A. As I said before, the area was that which was annexed to Kansas City, Missouri.

Q. Did Central West obtain a franchise from the City of Kansas City, Missouri for that territory? A. Central West obtained a franchise from the City of Kansas City, Missouri, and continued to serve that area after the annexation. However, we had some interruptions of gas on cold days. We suffered tremendous pressures from all sides to do something about our gas situation so that these customers would be warm. We had The Gas Service Company at our side ready and willing to serve this area, and

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who were also franchised in Kansas City, Missouri.

It became necessary in order to protect the balance of our territory, to have an adequate supply of gas for our customers, to reduce the size of our distribution system and we therefore entered into a transaction of transferring 3,000 customers in this area to The Gas Service Company.

Mr. Walsh: Were they all space heating customers?

The Witness: That was the total number of customers at that time and a large majority were space heating customers. That was an area, if you realize it, of relatively new homes having been built within the last ten to 15 years, prior to that during which time we had the area piped for gas and consequently for the most part they were space heating customers.

By Mr. Woods:

Q. Was that territory at that time in a rapid development period as a residential area? A. Exceedingly so. The area was ideally situated for residential development. There were a number of home builders operating in the area. Streets were laid out, utilities were there, and it had grown rapidly and it has continued to grow rapidly since that time.

Q. Mr. Vaughn, as an official of Central West Utility Company, are you familiar and do you have an opinion as to the industrial potential of the presently certificated area

that Central West has in Clay County? A. It is my opinion that with an adequate supply of gas, an industrial growth can be had in our area. We have in our area, as I have said, the Wabash Industrial District. It lies above flood line. It is served by highways and served by a spur line of the railway. It is well located so far as population growth is concerned.

By that I mean the residential area around it, and we think that there is nothing to prevent a good industrial growth in our area.

Q. You have mentioned the Wabash industrial site. Are there industrial capabilities that are favorable in other portions of your territory, in your opinion, Mr. Vaughn? A. There are. The area extends down close to the Mis-

souri River on the eastern side of Kansas City, Missouri. There is a new barge terminal being built on the Missouri, adjacent to our area. I mentioned before the new municipal airport at the other edge of our area; as well as that there are opportunities for numerous small industrial operations that would ordinarily come in any well-populated area.

Q. What in your opinion is the greatest retarding factor to the industrial development of your territory? A. The lack of gas. That is my opinion.

Q. Are you familiar in your capacity as an officer of Central West, with residential developments that are

either taking place or are proposed for your certificated area? A. Yes. As I have said, there are builders operating in the area, building subdivisions and we know of plans by real estate operators for the building over the next two or three years of as many as 5600 new homes in our certificated area.

Q. In your opinion, do you think that such a development of that area is probable? A. I believe it is probable and I believe that with the proven development of the area, that we can expect the continuation of that growth and that that figure of 5600 homes is not in any way out of line with the probabilities.

Q. Incidentally, can you state the approximate requirements that Central West has experienced for its domestic customers on a peak day—the average amount of gas needed to supply a domestic space heating customer on a peak day? A. On a peak day, our records indicate that there would be 1 8/10 Mcf per domestic customer in this area.

Mr. Walsh: Could I ask a clarifying question?

Mr. Woods: Surely:

Mr. Walsh: Is that predicated on an average over a period of years?

The Witness: Yes. That is definitely an average figure.

Mr. Woods: That is all. You may inquire.

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Cross-examination

By Mr. Littman:

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Q. According to my addition, we would have for those two companies, that is, Central West Utility Company, combined with Missouri Power and Light Company for delivery up at Excelsior Springs or in that vicinity, for the winter of 1953-1954 winter peak day, 10,890 Mcf, and for the winter of 1957-1958, 16,095 Mcf.

Do you follow me, Mr. Vaughn? A. Yes.

Q. I just want to know who is going to sign up or who you think is going to sign up for this 24,850 Mcf of gas that it is being suggested—I will use the passive mood—be delivered by Panhandle up here at Liberty?

Can you enlighten us, please? A. Bear in mind that for more than ten years we have been dragging our feet in our certificated area, doing no advertising, exerting no salesmanship, making no concerted effort to get business and to expand our territory because of the known fact that we had a physical limitation on the amount of gas that we could serve.

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The figures represent the potentialities of our area if we were to exert ourselves and do a proper kind of gas distribution business.

Q. Now will you please answer my question?

Presiding Examiner: Read the question, Mr. Reporter.

(Question read.)

The Witness: It would be obviously unwise for us to sign up at the present time for that amount of gas at the present tariff, with penalties as they are.

By Mr. Luttman:

Q. So you are not suggesting that you are willing to sign up for any such amount as that, is that right? A. That's right.

Q. There is one matter that almost slipped by me. You spoke of having ceded a certain territory to Gas Service Company, shown in blue on Exhibit 130, which is the North Kansas City area.

Do I understand that you sold your distribution system in that area to The Gas Service Company? A. That is right, we did.

Q. What other facilities, if any, were involved, other than just the pipe? Is there the sale of a franchise or the sale of anything other than just the physical facilities there? A. I believe not. We, of course, gave up our certificate

of convenience from the Missouri Public Service Commission to that area.

Q. You just didn't give that property to Gas Service Company for nothing, did you? A. No, we did not.

Q. Can you tell us how much money you received for that property from The Gas Service Company? A. It is a matter of record. The figure was arrived at by arbitration. My recollection is it was in the neighborhood of $650,000.

Q. How did that price compare with the original cost

less accrued depreciation on those properties? Do you know? A. It was above our book cost on that property. The system had been built largely pre-war with lower costs and with material changes in price levels.

Q. In other words, your company did make some profit on that particular transaction? A. That's right. We did it reluctantly, however.

Q. Not enough profit? A. Not by comparison to the potentialities of the area.

Q. I understand.

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By Mr. John A. McGrath:

Q. Mr. Vaughn, who supplies Gas Service Company, if you know? A. Cities Service Gas Company, I believe.

Q. The terminology "trouble and difficulty" has arisen here in your relationship with Panhandle Eastern. When did that first come about? A. Our first connection with Panhandle? Is that your question?

Q. No, your first difficulty with them. You mentioned

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somewhere around February 1, 1951, I believe. A. I would say that it began earlier than that because of the lack of an adequate supply of gas and our ability to foresee that there would not be enough gas for our expanding business.

Q. Would you care to state for the purposes of this record, just why that difficulty arose between you and Panhandle Eastern? A. Panhandle told us that they didn't intend to improve the Liberty lateral, that it was uneconomic, unfeasible, the lateral was too long. It was made up largely of old pipe.

Q. Is that the only reason that this difficulty has arisen? What is the basic reason, would you care to say, why you

and Panhandle seem to be at loggerheads with one another? A. Our basic reason is simple: We have an expanding area of great potentiality. We are in the gas distribution business and we hope to stay in the gas distribution business; and we want an adequate supply of gas from our source with whom we have done business continuously since 1936.

Q. Do you have an opinion as to why they do not care to increase their sales to you?

Mr. Seacat: I submit, if the Examiner please, he has stated his opinion.

Presiding Examiner: I haven't heard it.

Mr. Seacat: I make the suggestion here to shorten the record. I would just as soon he would go ahead and state it.

A. My opinion is what they have stated to us, that they say the line is uneconomical for them to improve and that they don't care to go on and continue selling us gas for our expansion purposes.

Presiding Examiner: I had heard that reason, Mr. Seacat. I thought you had reference to some additional testimony.

By Mr. John A. McGrath:

Q. And you feel that the proposed additions as set forth on Exhibit 128 are reasonable and economically feasible?

Mr. Littman: I am going to object to that, Mr. Examiner. There has been no foundation laid for any such conclusion, not so far in this record.

Presiding Examiner: Read the question.

(Question read.)

Presiding Examiner: I will rule out that question. No foundation was laid.

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Mr. John A. McGrath: I believe the witness stated, Mr. Examiner—the witness can correct me—that they felt that the building of this line would be economic, it was economically feasible. I believe I am correct in that statement, am I not, Mr. Witness?

The Witness: I believe I said that. My basis for saying

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that again is the fact that we have a wonderful area to serve at the end of this line, with great potentialities.

By Mr. John A. McGrath:

Q. So that your only bone of contention between Central West and Panhandle Eastern is the determination of whether this 19 mile, ten-inch line and 4.8 mile, 10-inch loop are economically feasible or not?

The Witness: May I hear that. I don't understand it.

Presiding Examiner: Read it, Mr. Reporter.

(Question read)

A. No. I think you can't limit this "bone of contention" to this particular suggestion of ours made in Exhibit 128. Our bone of contention is that we con't have gas in Clay County and we want it, and it doesn't make any difference how we get it or from whom. We have made efforts to get it from others, and we have made efforts over the years to get it from Panhandle.

By Mr. John A. McGrath:

Q. And you have been unsuccessful in obtaining additional supplies from other suppliers? A. Yes.

Q. And Panhandle has refused to increase its quantities to you, is that correct? A. Yes.

Q. And there is no other reason other than the fact

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that they feel that it is uneconomic for them to increase their sales to you?

Mr. Woods: If your Honor please, I object to that because he can't know what is in Panhandle's mind. This is asking this witness to state what is in Panhandle's mind and what is their reason.

Presiding Examiner: You can ask the witness if he knows of any other reason. Do you want to put that question, Mr. McGrath?

Mr. John A. McGrath: Yes, sir.

By Mr. John A. McGrath:

Q. Do you know of any other reason than that which you stated Panhandle wrote to you in a letter about its economics? A. I know this, that the Gas Service Company serves an area in Jackson County somewhat along the Liberty lateral, that that area itself is growing very rapidly, and that Gas Service obtained some of its supply for this area from the Liberty lateral, and that the taps of the Gas Service Company, the points at which they take gas off the Liberty lateral, are upstream to our town border station at Liberty.

I have heard it said that—

Mr. Littman: I object to what he heard it said, Mr. Examiner.

Mr. Seacat: The question was asked on cross-examination,

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if the Examiner please. I think it is well within the scope of the answer if the question is to be answered.

The Witness: I understand that Panhandle believes they would not be able to help our situation without also being in a position to serve more gas to Gas Service Company upstream of us.

By Mr. John A. McGrath:

Q. I thought you stated that Gas Service Company did not receive any gas from Panhandle? Am I wrong in that? A. Gas Service Company, I understand, obtains their major supply of gas from the Cities Service Gas Company, but also obtains a supply in this area along the Liberty lateral from Panhandle Eastern.

Q. Now this gas that is going into the Ford Plant being served by Gas Service Company: To your knowledge do you know where Gas Service Company is obtaining that gas, from which supplier? A. That comes from the Cities Service Gas Company. That comes out of the main distribution of Kansas City, Missouri.

Presiding Examiner: Just a moment, if I may break in and ask this question, Mr. Vaughn, so I can follow your testimony. Is it your understanding that Panhandle Eastern is not able to or does not choose to serve Gas Service Company a larger volume of gas? Does that follow through on the reason why

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you gave for their reluctance to supply your company with a greater volume of gas?

The Witness: Answering that, I would say that Panhandle Eastern Pipe Line Company tells us that one of the reasons they don't care to improve the Liberty lateral is because they are in a position also of having to serve The Gas Service Company.

Presiding Examiner: If they did improve the Liberty lateral.

The Witness: It they did improve the Liberty lateral.

By Mr. John A. McGrath:

Q. Why, if you know, has Cities Service been unable to furnish gas to Central West Utility Company?

Mr. Seacat: What is that question?

Presiding Examiner: Read it, Mr. Reporter.

(Question read)

A. Cities Service Company told us in a letter at one time when we applied to them for gas that we should look to our regular supplier and that they were not interested in making a connection to sell us gas in our area, that they had felt no obligation to do so and didn't care to come into the situation.

By Mr. John A. McGrath:

Q. If you don't receive additional quantities, will you have to forfeit further territories to Gas Service

Company? A. As I testified, the City of Kansas City, Missouri, is contemplating and will take over another area within their boundaries in 1959. That automatically comes within the area of Kansas City, Missouri, in which The Gas Service Company has a franchise. The problem will arise again as it did in 1951, as to the ability of Central West Utility Company to serve that area as well and with the same certain source of supply that could be had if the area was served by The Gas Service Company.

It is possible that the question will arise and have to be solved.

Q. You spoke of pressures being placed upon your company by various organizations and industrial concerns within the Kansas City Area. Is that type of pressure still going on? A. No, not at the moment, because Kansas City, Missouri, is not interested in our area outside of their boundaries at the present time. I would say it is relatively quiet. We have had a fairly warm season. Our public relations are good at the moment.

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By Mr. John McGrath:

Q. Mr. Vaughn, do you have any reasons to believe that the encroachment upon your territory by other natural gas distribution companies is in any way due to any actions taken or failed to be taken on the part of Panhandle Eastern?

Mr. Littman: Mr. Examiner, I think the question is objectionable. But if it is yes or no, at this point I will not object to that.

Presiding Examiner: It calls for an answer of yes or no. You are instructed to so answer, Mr. Witness.

The Witness: I hate to take the time, but can I hear it again?

Presiding Examiner: Read it, Mr. Reporter.

(Question read.)

A. The answer is yes.

By Mr. John McGrath:

Q. What are those reasons?

Mr. Littman: Just a minute, Mr. Examiner. I am going to ask now, since the witness has answered yes to that, that he confine his answer to this next question to definite evidence within his own personal knowledge.

I don't think your Honor wants to hear a lot of rumors here; or, just because Panhandle hasn't given these people any additional gas, or just because Cities Service hasn't, that there must be some collusion between them. I think he has

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got to now put his money where his mouth is and just give this Examiner and this Commission direct evidence of any such accusation as that which he has made.

We are getting into a very serious charge. I don't think

it is relevant or material to any issue in this case. There has been no allegation of any such proposition in this case.

Presiding Examiner: Mr. Vaughn, will you confine your answer to what you know of your own knowledge. Do you want the question read?

The Witness: You want reasons why I say yes?

Presiding Examiner: I don't want anything. It was a question put by counsel. Read it to him, Mr. Reporter.

(Question read.)

Mr. Littman: I am going to object, Mr. Examiner, on the ground that that has no relevance in the first place; but, if he does answer, he should confine his answer to evidence. There has been no allegation here of any such matter; there has been no allegation of any conspiracy. They claim that their entire petition to intervene here is centered on the proposition that there is discrimination because Panhandle has offered here to supply additional gas to other customers but not to Central West Utility Company.

That is all we have before us. There is no allegation of a conspiracy or anything like that. That is not a part of their pleading and, as your Honor knows, the order granting this

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intervention said that Central West should be confined to the issues alleged in its pleading.

This goes far beyond that. I say if the question is to be answered, it be confined to matters within this witness's knowledge.

Mr. Woods: If the Examiner please, the issues raised here by Central West are as Mr. Littman said—the discrimination that has been practiced against it as opposed to other lateral customers of Panhandle.

The discrimination has resulted from the refusal or failure of Panhandle to give gas to Central West in the same

proportion or on the same basis as it has the other lateral customers. This is not a matter that Central West is bringing up. The discrimination is what our issue is, and that is what our evidence has been directed to.

Presiding Examiner: Do I understand that you do or do not object to the question, Mr. Woods?

Mr. Seacat: We don't object to the question, but we don't want to be held responsible for it.

Mr. John McGrath: The witness is a policy witness, and he says he has reasons. I submit that conspiracy is perhaps a part of the discrimination. This gentleman says he has reasons. I don't object to him confining it to evidentary reasons, as Mr. Littman wants them. In fact, that is the only thing that should properly be admitted.

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He says he has the reasons and he is willing to spell them out.

Presiding Examiner: I don't know how far we ought to go into this line of inquiry, but I will overrule the objection to the pending question. Please confine your answer to what you know of your own knowledge, Mr. Vaughn.

A. The reason for my answer is this, that Panhandle by failing to furnish us enough gas in Clay County has enabled The Gas Service Company, which serves adjacent to us, to make inroads into our territory once in 1951, and I think will again make every effort to obtain our territory unless we get an adequate supply of gas to serve the customers in Clay County.

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Presiding Examiner: Do I understand, then, that 12,000 Mcf

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are your present requirements?

The Witness: Our actual requirements on February 10, sir, were 6,173 Mcf. The past winter has been characterized by relatively mild weather—at least no extremely cold day. Consequently the figure that I gave is one that——

Presiding Examiner: Mr. Vaughn, can't you be a little more definite one way or the other about the volume of gas that you would have signed up for? You said you think it would have been about 12,000 Mcf. Can't we have a more definite answer one way or the other?

The Witness: I can be definite about that: I would say that we would sign up for 12,000 Mcf on a demand basis had we had an opportunity and had we been assured of an adequate supply of gas through an adequate lateral.

Mr. Littman: Pardon me, Mr. Examiner. May I inquire whether he means 12,000 Mcf of contract demand for each of the five winter months?

The Witness: Yes. That is what was asked me, wasn't it?

Presiding Examiner: Yes, sir. Am I to understand, then, that those are the volumes which your company needs on peak days to meet your requirements?

The Witness: That's what we thing we will need to meet our requirements and protect us against any kind of weather that we might run into and to take care of the growth that we anticipate in our area over the next perhaps two or three years.

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Presiding Examiner: Proceed, staff counsel.

Mr. Flax: That is all we have of Mr. Vaughn, Mr. Examiner, at this time.

Mr. Littman: Mr. Examiner, I would like a few more questions unless you want to go ahead with Mr. Seacat.

Presiding Examiner: I wish you would go first, please.

By Mr. Littman:

Q. You mentioned earlier in your examination a figure of 6,173 Mcf as the volume taken by your company on the peak day of the winter of 1954-55. Is that correct? A. That's right.

Q. You now say that your company is willing to sign a contract to take about twice as much gas, namely, 12,000 Mcf. Is that your testimony? A. Based on the assumption that it is deliverable.

Q. Of course that is the assumption, obviously. A. And our reason for that is the potentialities of this area that we have and the opportunities that we would have to expand that to get more customers if we were permitted to.

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A. I don't remember those amounts.

Q. Does your company have at present any restrictions on the attachment of space heating customers? A. No, no restrictions.

Q. You mean to say your system is taking them on as fast as they become available to its lines without restrictions? A. I have said before that we are in effect dragging our feet. We are taking on customers without restrictions when they are close to our lines and when we find no way in which we can retard—no valid reasons to turn them down except the reason that we fear that in the coming season or

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the period ahead, we will be short of gas and be unable to serve them.

Q. Let's be a little more specific. You spoke a while ago concerning these builders who come in and take over large areas and construct a great many homes in a certain

neighborhood. They naturally come to you for space heating gas, do they not? A. They do.

Q. And they want you to extend your lines into those new streets and into those subdivisions. Isn't that right? A. They do, yes.

Q. You have done it, havn't you? A. We have done it.

Q. Every time they have requested you to do it, you have done it? A. Not every time.

Q. Most every time? A. We have told them the situation and advised them of our situation, of the hearings that are taking place and the problems that we have with respect to a source of supply.

Q. Have you at any time in the past ten years had any restrictions on the attachment of new space heating customers anywhere in your system? A. Yes. There were restrictions by the Missouri Public Service Commission prior to 1946, I believe, or 1947.

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Q. Prior to 1946-47. That was immediately after the war and that was a general situation that prevailed in the whole State of Missouri, wasn't it? A. That's right.

Q. But since that time you have had no restrictions on the attachment of new space heating customers, Is that right? A. That's right, but I would like to correct my previous answer if I may. The Missouri Commission lifted their heating restrictions in March of 1950. I said 1936 or 1937, which is erroneous.

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Mr. Woods: The documents to which I address my request are all included in Docket No. G-2037, which is entitled "In the Matter of Panhandle Eastern Pipe Line Company."

I move the incorporation of the following items from that docket by reference. First, the application by Panhandle Eastern Pipe Line Company for a certificate of public convenience and necessity, that application being filed on September 2, 1952, and relating to improvements to the so-called Peoria, Illinois, lateral.

Presiding Examiner: Just a moment. Let's take these one at a time. The application referred to will be designated Item NN by reference. There is yet no ruling on its incorporation by reference.

(The document above referred to was identified as Item NN, by reference.)

Mr. Woods: Next, your Honor, is the finding and order of this Commission in that same docket number, dated December 16, 1952, granting a certificate of public convenience and necessity for that work to Panhandle.

Presiding Examiner: The findings on order referred to will be designated Item OO by reference. I may say, Mr. Woods, that

I would like a statement of the purpose of this material you are offering as to how it is pertinent to the issues here presented. You can make that as you go along or after you have made the specific offers, as you please.

(The document above referred to was identified as Item OO, by reference.)

Mr. Woods: If it is agreeable with your Honor, May I complete the designation of these and then I will explain.

Presiding Examiner: All right.

Mr. Woods: The next item from that docket is the certificate of compliance filed by Panhandle on December 29, 1952.

Presiding Examiner: The certificate will be designated Item PP by reference.

(The document above referred to was identified as Item PP, by reference.)

Mr. Woods: The next item is Panhandle's acceptance of the certificate of public convenience and necessity, filed with the Commission on January 13, 1953.

Presiding Examiner: Do I understand that all this material is filed in Docket No. G-2037?

Mr. Woods: G-2037, yes, sir.

Presiding Examiner: All right. Panhandle's acceptance referred to by counsel will be designated Item QQ by reference.

(The document above referred to was identified as Item QQ, by reference.)

Mr. Woods: The final item is the statement of actual cost filed by Panhandle in that docket on June 10, 1953.

Presiding Examiner: The statement of cost will be designated Item RR by reference.

(The document above referred to was identified as Item RR, by reference.)

Mr. Woods: If the Examiner please, I am offering and requesting the incorporation of these items by reference in this docket for this reason: This application and the certificate granted, authorized Panhandle to construct additional facilities on the Peoria, Illinois, lateral which had an ultimate cost of some $970,000.

Presiding Examiner: Will you tell me the approximate date the application was filed?

Mr. Woods: The application was filed in September of 1952—September 2—which was following the order issued in Dockets G-1116, et al., in which discrimination was found by the Commission in Panhandle's lateral policy. The Peoria lateral was one of those.

Between that time and the present, and more specifically before the case was argued in the Third Circuit, this con-

struction work had been done by Panhandle on the Peoria lateral, and we offer it for the purpose of showing that

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since that finding of discrimination in 1952, which is res judicata, Panhandle has in 1952 spent additional money on the Peoria lateral and in this present docket is proposing approximately a $3 million expenditure on the Peoria lateral, which goes to the discrimination issue which is presented here.

Not only does the same discrimination exist as existed back in 1952, but it has been compounded twice since that time. That is the reason I request the incorporation of those items by reference.

Mr. Littman: Mr. Examiner, we object to these incorporations by reference. These matters all occurred before the Court of Appeals heard argument in the last proceeding, to which I referred yesterday. The Court of Appeals of the Third Circuit.

The Court of Appeals knew about this situation surrounding the Peoria lateral, and notwithstanding those facts, decided the case as I stated yesterday, stating that whether there was or was not discrimination, it is immaterial to the problem that Panhandle may in its unfettered judgment decide whether it will or will not construct laterals or any other facilities, that that is a matter under the Natural Gas Act which rests in the discretion of the management.

We don't think therefore that any of this material has any relevance to any of the issues in this case and is

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therefore utterly immaterial.

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Presiding Examiner: The objection is overruled. The following items heretofore specifically referred to are received in evidence by reference: Items NN, OO, PP, QQ, and RR.

(The above mentioned items, previously identified, were received in evidence by reference to the files of the Commission.)

Mr. Seacat: Carrying forward, if the Examiner please, this matter of making the record by reference, before we get away from the statement Mr. Littman made, I was in Philadelphia, too, and we didn't cry any more tears than Mr. Littman did.

Presiding Examiner: Mr. Seact, let's get going with this case and save your argument for your briefs.

Mr. Seacat: I would like to have incorporated—if it is necessary to do so; I am not clear about that, so I will make

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the statement that I want to make now—the basic opinions through this thing in Docket G-1116.

I refer now and offer, if necessary, by reference as an item here Opinion No. 314 of June 12, 1951, in Docket No. G-1116.

Presiding Examiner: Are these all opinions which you propose to offer?

Mr. Seacat: They are, sir.

Presiding Examiner: The Commission can take official notice of them. I prefer not to incorporate them by reference unless counsel for other parties want them as well, as a matter of convenience. What do you say, Mr. Littman? I would prefer not, just to keep from cluttering up the record. The Commission, of course can take official notice of those.

Mr. Littman: I agree with you. I don't see any reason

why we should incorporate Commission opinions and orders in here. They are all matters of public record.

Presiding Examiner: That is true.

Mr. Seacat: I will be happy to abide by the ruling. I merely wanted to put it on this record.

Mr. Walsh: I agree with Mr. Littman. We are always hearing about the expense involved, Mr. Seacat. If you incorporate by reference, you are only spending more money.

Mr. Seacat: I am merely finding out where a poor boy from the Ozarks belongs, anyhow. I have prepared, if the Examiner

please—I am a little at a loss just to know what to do with it—a couple of exhibits here. I would have to state that they were made under my supervision. I don't know whether it would be necessary for me to take the stand and testify as a lawyer in the case. I would rather not, if they can be received on counsel's statement.

I will merely state what they are. They are a summation of facts that are in the record that are brought forward here in exhibit form in the belief that they will be informative and convenient to the parties and to the Examiner.

Presiding Examiner: You can make your offer and we will see if objection is raised to them.

Mr. Seacat: I distributed copies of these when we were here before, if the Examiner please. I am handing you now a single sheet entitled, "Analysis of Cost of Lateral Improvements," and also another exhibit in this docket, "Market Data."

Presiding Examiner: The first tabulation, "Analysis of Cost of Lateral Improvements," will be marked Exhibit 131 for identification.

(The above mentioned document was marked for identification as Exhibit No. 131.)

Presiding Examiner: The next document entitled, "Market Data Presented by Central West Utility Company" will be marked Exhibit 132 for identification.

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(The above mentioned document was marked for identification as Exhibit No. 132.)

Mr. Littman: Mr. Examiner, perhaps some time could be saved. I have had some off-the-record discussions with Mr. Seacat about these two papers. Mr. Seacat, as he has indicated here, told me that he prepared these papers by simply summarizing certain figures that appear elsewhere in this record. He has simply tabulated them and used them as a basis to show in the one sheet that has been designated Exhibit 131 the estimated cost of each of these several laterals which we are proposing to build, and the average cost of the increase in maximum day capacity, Mcf; and the market data exhibit, No. 132, is simply a compilation or a pulling together of various figures that are now in the record.

It seems to me that this is the kind of material that lawyers put in their briefs as tabulations. It doesn't add anything new to the record. As I understand it, everything that is in these papers is already in the record. I don't see any reason why we need to put this in the record. It would seem to me that what we might do is simply call it Mr. Seacat's work papers.

We all have copies. Maybe we will make a little use of it as we go along. He can make all the arguments he wants in his brief.

Presiding Examiner: I think there is merit in what you

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say, Mr. Littman. Mr. Seacat, I can't see that these are proper as exhibits. Do you press your offer, or do you want to be heard further on it?

Mr. Seacat: Not too far, but I do say this about it, if the Examiner please. The one exhibit about which I am not too clear would be 132, in which I went through and took out of their application Exhibit X information that is in there. Am I correct in saying that Exhibit X is part of this record? That is the thing I was concerned with.

Mr. Flak: Do you mean Exhibit X?

Mr. Walsh: Do you mean Exhibit X to the application?

Mr. Seacat: Yes, sir.

Mr. Walsh: Definitely it is in evidence. You know, Mr. Seacat, those are pleadings. They are not evidence.

Mr. Littman: Weren't those made an item by reference in this case? They usually are.

Presiding Examiner: Let's take a moment and see. Exhibit X to the application in Docket No. G-2433. Is that what the material is from?

Mr. Seacat: Yes. I don't want to un-encumber the record.

Mr. Littman: We wouldn't have any objection if Exhibit X to the application were made an item by reference. Then you would have your basic material.

Mr. Seacat: Then I will offer it as an item by reference.

Mr. Littman: And not make these two things an exhibit.

Mr. Seacat: As I say, I don't want to over-burden the record, but I don't want to under-burden it.

Mr. Flax: Mr. Examiner, my notes do not show Exhibit X to the application as being part of the record.

Presiding Examiner: Thank you. I don't see it either in my summary of the items by reference.

Mr. Seacat: My recollection is that Mr. Farley offered an exhibit based on Exhibit X. So I will, if the Examiner please, offer Exhibit X attached to the application by reference as part of the record here.

Presiding Examiner: The application in Docket No. G-2433?

Mr. Seacat: That's right.

Presiding Examiner: Is there any objection to the incorporation by reference of this exhibit?

Mr. Morley: The entire application?

Presiding Examiner: No, sir, Exhibit X. What is Exhibit X?

Mr. Seacat: Market data. I will tell the Examiner what it is. It is the detail from point to point all through here. Mr. Farley brought forward an exhibit, as I remember it, that was based on Exhibit X; but he eliminated or did not include the lateral towns at all. I wanted the lateral information.

Presiding Examiner: The application isn't evidence in the case. I can see where you can have documents which are in the form of exhibits which are proper to incorporate by

reference. Frankly I am doubtful about something in the way of market data. Isn't that properly the subject matter of testimony?

Mr. Littman: Mr. Examiner, I understand Exhibit X is a compilation of the questionnaires and the answers to the questionnaires sent out by Panhandle to its customers as a basis for supporting the market.

Mr. Seacat: It is required by the Rules, is it not?

Mr. Littman: It is required by the Rules to be filed.

Mr. Seacat: The question that prompted me to bring this forward is exactly the question you raised here now: Is it part of the record or not? If it is, I am not pressing it at all.

Mr. Walsh: Mr. Examiner, may I suggest this. I know the staff has seen these various exhibits prior to this hearing having started; but there is so much evidence which has been introduced here in the way of exhibits and so forth that we would like an opportunity to give Exhibit X

another perusal to see if there is a necessity of having this incorporated by reference.

We therefore request you to defer any ruling.

Mr. Seacat: I will keep the offer alive.

Presiding Examiner: Very well. Exhibit X to the application in Docket No. G-2433 will be designated Item SS by reference and a ruling on its admissibility will be withheld

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until a later point in the proceeding.

(The above mentioned item was identified as Item SS by reference to the files of the Commission.)

Mr. Sisson: Mr. Examiner, was the exhibit offered by Mr. Seacat entitled, "Analysis of Cost of Lateral Improvements," withdrawn?

Mr. Seacat: No, I am not going to withdraw it. I will just accept the ruling on it.

Mr. Morley: They are marked for identification, though, as designated; but they are simply not being offered. Isn't that the status of these two exhibits, Nos. 131 and 132?

Presiding Examiner: I will reject Exhibits 131 and 132 for identification.

Mr. Morley: Then these numbers are not designated?

Presiding Examiner: They are on there now, yes.

Mr. Seacat: That is the trouble; we have them on the record now.

Presiding Examiner: We have them on the record.

Mr. Seacat: I don't want to withdraw them. The Examiner asked if I pressed the offer. In light of what has been said around here on the record, I am not pressing the offer.

Mr. Martin: Are you withdrawing them or not?

Mr. Seacat: The point is just what the Examiner says. I don't think you can withdraw them. The numbers have been assigned.

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Presiding Examiner: The numbers have been assigned, and it seems to me it would make for confusion if we attempted to erase the numbers, in effect.

Mr. Walsh: I am somewhat confused now, Mr. Examiner. Are you allowing the exhibits to be identified as Exhibits 131 and 132?

Presiding Examiner: For identification, and then they are rejected.

Mr. Walsh: Are you rejecting the identification?

Presiding Examiner: No. They were offered in evidence and I did not receive them.

Mr. Walsh: I don't think the offer has been made up to this time, has it?

Mr. Seacat: I will offer them, then; but I will not press the offer.

Mr. Walsh: Offer them now? Is that it?

Mr. Seacat: I think the implication is that I did offer them.

Presiding Examiner: The same ruling on them.

(The above mentioned documents, previously identified as Exhibits Nos. 131 and 132, were rejected.)

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M. M. Farley

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Cross-examination (Resumed)

By Mr. Shannon:

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Q. The next five are power plants for which you show only annual volumes, but no peak day volumes. Were these dump loads? A. Yes, sir.

Q. Are these long-standing direct services that you have made, going back to the 1930's? A. Not in all cases, no, sir.

Q. Let's take the Wallace Power Plant. That is the largest. When did you start service to the Wallace Power Plant, Central Illinois Light Company? A. August 6, 1949.

Q. What is the contract maximum? A. 20,000 Mcf.

Q. Per what? A. Per day.

Q. Per day? A. Yes, sir.

Q. Give us the contract maximum on each of these, then.

Take Central Illinois Electric Gas Company power plant, that is the first one.

What is the contract maximum per day? A. 1,000 Mcf.

Q. The Central Illinois Light Company, Wallace Plant, you have given us that as 20,000 Mcf a day. Is that right? A. I believe that agreement was reached and cancelled on Wallace Power Plant.

Mr. Keefe: I think I can clarify that. There has been a new agreement with Central Illinois Light, the same volumes, 20,000 Mcf per day.

Mr. Shannon: I will be glad to accept counsel's statement.

By Mr. Shannon:

Q. The City of Jacksonville: What is the contract maximum there? A. 1,000 Mcf.

Q. That is per day, isn't it? A. Yes, sir.

Q. The City of Morton power plant. A. Do you want the daily maximum contract?

Q. The daily maximum. A. 500 Mcf.

Q. And the City of Roodhouse power plant? A. 500 Mcf.

Q. How did you arrive at the annual volumes you show

for these five power plants? A. It is based on the approximate level of load in 1953.

Q. What causes a curtailment of these loads? Is that instructions from Panhandle? A. Yes, on orders from Panhandle?

Q. In other words, if Panhandle has the gas available, these power plants would receive it? Is that right? A. If they want it, yes, sir.

Q. If they want it? A. Yes, sir.

Q. Are there situations where the power plants don't want the gas even though you have it available? A. In some cases, yes, sir.

Q. What causes that? Do you know? A. Of course the power plant, I am thinking particularly of the Wallace Power Plant, where they have coal for stand-by, and in some cases their coal pile gets stocked up and they have to use some coal and do not use the gas.

Q. Do you know what load factor approximately these power plants take gas at? A. I have never made the computation.

Q. Is it a seasonable load in the sense that they use it during the summer and not in the winter? A. They use it through the winter except on the colder

days when we order curtailments.

Q. So as a practical matter, except for the necessity of getting rid of the stockpile of coal, they take all the gas you give to them, don't they? A. To the extent they need it.

Q. These plants operate all the time? A. Up to their requirements.

Q. I just calculated here these five plants represent a load of 20 million cubic feet a day. That would be their

requirement, say for 200 days during the summer? A. No, sir.

Q. They take less than their requirements, is that right? A. I know particularly with respect to the Wallace power plant, I do not believe they have ever taken 20,000 Mcf.

Q. They don't need 20,000 Mcf when they operate the plant at full capacity? A. I don't know what the actual figure is on that.

Q. I understand from Mr. Keefe that you just executed a new contract with them for the same volume, 20,000 Mcf. Is that right? A. I have not seen that particular contract.

Q. Do you know how the 20,000 Mcf was arrived at? A. No, sir.

Q. How long has that volume been in effect?

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A. Since the date of the contract, I believe, which was July 21, 1949.

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Q. The Bohn Aluminum and Brass Company, that is at Adrian, Michigan, is it not? A. Yes, sir.

Q. That is the company that was involved in the proceedings that led to Opinion No. 274, Dockets G-2035, et al., was it not?

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A. I believe that is correct.

Q. You originally had an arrangement with the local distributing company there under which you sold this gas directly and the distributing company wheeled the gas, so to speak, over to the direct industry. Isn't that right? A. That is correct.

Q. And subsequent to the Commission's opinion requiring you to sell the gas to the local distributing company for

resale to the industry, what did you do? A. Subsequent to the Commission's opinion?

Q. Yes. How did you change your arrangement to carry out the Commission's opinion? A. Since July 28, 1954, we have billed Citizens Gas Fuel Company for gas in excess of the contract demand on the I-1 rate. We do not bill Bohn directly any more.

Q. There was a contract maximum, was there not, in this arrangement? A. With respect to the Commission's order.

Q. You originally had an arrangement with the Bohn Aluminum Brass Company to deliver them a certain amount of gas on an interruptible basis? A. Oh, yes, that was 2,200 Mcf.

Q. Per day? A. Yes, sir.

Q. Is that maximum still in effect, except that you sell

the gas to the Citizens Gas Company for resale to Bohn? A. I assume it is still in effect.

Q. Since July 28, 1954, you have been selling Bohn's requirements to the Citizens Gas Company under your I-1 schedule? A. Yes, I believe that is on appeal. I think there is some temporary arrangement.

Q. I think it is on appeal, but I just wanted to find out what the facts were with respect to your operations in the meantime. A. Yes, sir.

Mr. Flax: I didn't catch your words about a temporary arrangement.

The Witness: I said I understand this is on appeal.

Mr. Miller: It is without prejudice to the rights of the parties on appeal as between the parties.

By Mr. Shannon:

Q. I don't want to interrupt, but while we are on this, Mr. Farley, the Bridgeport Brass Company has been sub-

stituted, has it not, as the operator of that plant for the Bohn Aluminum and Brass Corporation? A. Yes. They took over that plant, I believe, on July 1, 1954.

Q. So the answers which you gave where you referred to Bohn Aluminum and Brass Company, would include the successor,

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namely, the Bridgeport Brass Company. Is that right? A. Yes, sir.

Q. How did you arrive at the 1,100 Mcf which you show as deliveries to this ocmpany? A. That is an estimated figure.

Q. Estimated by you or by the customer? A. By me.

Q. How does it compare with your deliveries to Bohn in the past? A. I believe it compares very closely because we were basing this on our past experience.

Q. I think you have already stated this is interruptible, is it not? A. Yes, sir.

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Mr. Farley, would you refer to page 3 of Schedule 1 of Exhibit 27. Near the top of the page under the side heading "Export" you show Union Gas Company of Canada, Ltd., with annual volumes, but you show no volumes for the peak days during the next three winters. Is that right? A. That's right.

Q. From this, are we to conclude that you assume that Union Gas Company of Canada will be completely curtailed on a peak day? A. Yes, sir.

Q. Does that represent your assumption or does that

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represent instructions you received from some other officer of the Panhandle organization? A. That represents my

assumption, which I checked with other people and they agree.

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Q. So that if I follow you, on page 1 of Exhibit 80 in line 15 we have the 1956 as total resale jurisdictional sales.

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311 billion feet roughly. Is that right? A. Yes, that's correct.

Q. So that 311 billion feet would be reflected in firm sales on line 1 of page 1 of Exhibit 135-A?

The Witness: May I have the question read?

Presiding Examiner: Yes; read it.

(Question read.)

A. That's correct.

By Mr. Shannon:

Q. If we add that to the 14 billion of firm direct industrial, you would have approximately 15 billion or 16 billion feet left. Is that the sales to Canada? A. Yes.

Q. You have reflected on page 1 of Exhibit 135-A 16 billion feet of firm sales to Union Gas Company of Canada in 1956. A. We have shown in there as firm, although it is interruptible. That is, the new portion of 10.5 billion is interruptible.

Q. The old portion is, too, isn't it? A. It is off-peak; April through October.

Q. Have you given us the data from which we can break the direct industrials down between firm and interruptible to arrive at the split that you used on page 1, Exhibit 135-A? A. Only with respect to my answer this morning, where I mentioned that certain loads are firm and certain are

3139

interruptible.

Q. Mr. Farley, nowhere have you shown in Exhibit 80, 135-A, or 27 any sales under your I schedules. A. No, sir.

Q. Is that right? A. That's right.

Q. From that are we to conclude that Panhandle does not propose to sell gas under its I Schedules? A. I assume there would be no sales under the I Schedules, that's right.

Q. Were you instructed by anyone in Panhandle's system to prepare your exhibits on the basis of that assumption? A. No, sir.

Q. You mean it is just simply a well known internal company policy that you aren't, so everybody operates on that basis? A. We are not selling any at the present time.

Q. You are selling it to Citizens Gas Company. A. With that one exception.

Q. Other than that, you are not? A. Other than that, we are not.

Q. As you understand the program of Panhandle, you don't propose to sell any. Is that right? A. I don't know what may happen with respect to the future on that position.

3140

Q. You are manager of Panhnadle's Rate Department, are you not? A. Yes, sir.

Q. And as such, you deal with the tariff that Panhandle has on file with this Commission? A. Yes, sir.

Q. Are you familiar with the provisions of paragraph 7 of your I Schedules as prescribed and made effective by the Federal Power Commission's Opinion No. 274? A. Yes, sir.

Q. Under which you are obligated to offer excess gas to buyers owning or controlling storage facilities?

Mr. Miller: May we have the question read?

Presiding Examiner: Read it, Mr. Reporter.

(Question read.)

A. Yes, sir.

By Mr. Shannon:

Q. You are familiar with the fact that Michigan Consolidated Gas Company owns and operates the Six Lakes Storage Field in Michigan, are you not? A. I am not too familiar with that fact, no, sir.

Q. You know that they do? A. I know they operate some storage field.

Q. And you are familiar with the fact that Michigan Consolidated has long had pending with you in writing a request

up to 100 million cubic feet per day of gas under your I-1 schedule? You are familiar with that, aren't you? A. I know there was such a request, yes, sir.

Q. In connection with the preparation of this hearing, did you or anybody in the Panhandle organization offer to Michigan Consolidated in accordance with your I-1 schedule any interruptible gas? A. Not that I know of.

Q. Do you know of any plants of Panhandle Eastern Pipe Line Company to offer any interruptible gas to Michigan Consolidated in compliance with the provisions of paragraph 7 of your I-1 schedule that is now in effect. A. No, sir.

Q. If Panhandle Eastern Pipe Line Company had any plans to offer such interruptible gas, would you know about it? A. I may not know of it.

Q. Aren't you generally familiar with service agreements of Panhandle with its resale customers? A. Yes, sir.

Q. And this would contemplate, would it not, the execution of a service agreement under the I schedule? A. Yes, sir.

Q. Do you know of any proposal or plan of Panhandle to make any such offer to Michigan Consolidated?

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A. I do not of my own personal knowledge, know of any such plan.

Q. Or any plan to execute any service agreement with Michigan Consolidated covering service under the I schedule? A. Not that I know of.

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Q. Referring to Exhibit 136, which gives us the new summer monthly contract demands of the 27 customers, is it correct that the summer contract demands of the remaining utility customers of Panhnadle are the same as those heretofore in effect? A. That's right.

Q. So that if we added those to the summer contract demand shown on Exhibit 136, you would have all of the monthly contract demands of the utility customers? A. That's right.

The Witness: May I have that question read?

Presiding Examiner: Read the last question, Mr. Reporter.

(Question read.)

The Witness: I would like to explain that if we added the contract demands shown in Exhibit No. 136 to the contract demands of the other customers——

By Mr. Shannon:

Q. That is what I intended to say, Mr. Farley. In other words, this combined with what we already have gives us

the complete picture on utility customers' contract demands. A. This combined with what we already had with respect to the other customers.

Q. We do not have, however, in the record so far the monthly volumes on the direct sales customers. Isn't that right? A. That's right.

3150

Q. Can you give us now for the year 1956, broken down between firm and interruptible, the monthly volumes on the direct sales customers? Possibly we can shorten this. Aren't the interruptible sales shown on Exhibit 135-A, page 1, in the amount of 16 million the portion of the direct sales made on an interruptible basis? A. Yes, sir.

Q. That gives us a monthly breakdown of that. So if you gave us the monthly breakdown of the direct firm sales, we would have the picture, wouldn't we? A. Yes, sir.

Q. Let's do that so we won't duplicate anything that is already in the record. A. The total direct industrial firm sales by months for 1956: January, 1,223,450 Mcf. February, 1,187,350 Mcf.

Mr. Wirth: May I have that last figure?

Presiding Examiner: Read it, Mr. Reporter.

(Answer read.)

The Witness: March, 1,224,050 Mcf.

Presiding Examiner: Speak slowly enough, please, Mr. Farley, so the figures can be copied down by counsel.

The Witness: April, 1,188,100 Mcf. May, 1,185,950 Mcf. June, 1,130,000 Mcf. July, 1,163,750 Mcf. August, 1,162,150 Mcf. September, 1,135,900 Mcf. October, 1,165,150 Mcf. November, 1,155,200 Mcf. December, 1,164,150 Mcf.

3151

By Mr. Shannon:

Q. Total? A. Total: 14,085,200 Mcf.

Q. Is 1957 the same? A. Due to the Leap Year, it is slightly different.

Q. Except for Leap Year, it is the same? A. Yes, sir.

Q. That difference would only be in February? A. Yes, that is correct.

Q. Give us the February figure and then we won't have to go through the others. A. February: 1,150,000 Mcf.

Q. Except for that, the other months in 1957 are the same as you have given us for 1956? A. Yes, sir. Your total in 1957 would be 14,047,850 Mcf.

Q. Now, Mr. Farley, you told us before lunch that your firm sales shown on Exhibit 135-A, page 1, include the sales to Canada. A. Yes, sir.

Q. Give us a monthly breakdown of those sales—1956, first. A. I gave you that information on an average daily basis, rather than the total for the month.

Q. The total for the month? A. I do not have the total for the month readily available.

3152

I do have the average daily.

Q. If we multiplied the average daily by the number of days in the month, would we arrive at the monthly total? A. Maybe I do have it by the month. Just a moment. I find another working paper where I do have that information.

1956: January, 628,100 Mcf. February, 587,700 Mcf. March, 628,200 Mcf. April, 1,811,200 Mcf. May, 1,871,500 Mcf. June, 1,811,200 Mcf. July, 1,871,800 Mcf. August, 1,871,600 Mcf. September, 1,811,200 Mcf. October, 1,871,500 Mcf. November, 607,900 Mcf. December, 628,100 Mcf. Total, 16 million Mcf.

1957: January, 686,500 Mcf. February, 620,000 Mcf. March, 686,500 Mcf. April, 1,914,400 Mcf. May, 1,978,100 Mcf. June, 1,914,400 Mcf. July, 1,978,400 Mcf. August,

1,978,200 Mcf. September, 1,914,400 Mcf. October, 1,978,100 Mcf. November, 664,400 Mcf. December, 686,600 Mcf. Total, 17 million Mcf.

Q. These volumes that you have given us for Canada for the years 1956 and 1957 include not only the deliveries covered by this present application, but also your previously authorized deliveries of 5.5 billion feet in the summer time, do they not? A. Yes, sir.

Q. Does this split of the annual volume by months represent your estimate or the estimate of Union Gas Company?

3153

A. It represents my estimate.

Q. Do you know whether or not Union Gas concurs in that estimate? A. No, sir.

Q. Referring to sheet 2 of Exhibit 135-A for the year 1956, in January you show here that you start the month with a balance in storage of 11 billion feet. Is that right? A. Yes, sir.

3154

Q. Does that represent working storage or cushion gas? A. That is cushion gas.

Q. You have prepared this sheet on the assumption that by January 1, 1956, you will have placed in storage by way of cushion gas 11 billion feet, is that right? A. I said it was all cushion gas. There may be in there about 1 million Mcf or 2 million Mcf of working storage. I believe the cushion starts out that first year around 10 billion or 11 billion and builds up; at the end of 1956 we would have 15 billion in the field.

Presiding Examiner: Mcf?

The Witness: 15 billion cubic feet.

By Mr. Shannon:

Q. Your storage cycle, of course, doesn't coincide with the calendar year, does it? A. No, sir.

Q. It might be more properly said to extend from May 1 to May 1. A. I think that would be right. Of course this exhibit shows that we will be putting in storage some gas in April, 1956 and putting some gas in in March 1957.

Mr. Wirth: May I ask one question?

Mr. Shannon: Sure.

Mr. Wirth: Is your storage balance at the beginning or end of the month?

3155

The Witness: That is at the end of the month.

By Mr. Shannon:

Q. Mr. Farley, what part of this do you take responsibility for and what part represents figures that other witnesses have covered here? A. Of course I take the responsibility for all the figures shown on line 1. That is the total deliveries shown on Sheet 1. The information with respect to the Waverly storage field in and out was obtained from Mr. Morton.

Q. He hasn't testified here, has he? A. No.

Mr. Miller: Our storage witnesses will be in position to sponsor that material as well as Mr. Morton.

The Witness: I think possibly he may have obtained those figures from some other storage witness.

Mr. Miller: Our storage witnesses, as I say, will be in a position to support that figure if there is any question about it.

Mr. Shannon: I want to find out just what Mr. Farley did here.

By Mr. Shannon:

Q. You had your total deliveries of 390 billion feet in 1956 from Sheet 1. I think we have been through that, so we know where that came from. A. Yes.

3156

Q. Now that is the total pipeline gas, isn't it, in that calendar year. Is that right? A. That is the total gas—sales, company use, unaccounted for, and so forth.

Q. That is the total amount of gas that got into the system in the calendar year from any source? A. It does not all get into the main line system. There are some field sales.

Q. I understand that, but this is your maximum gross figure you are dealing with, 379 billion feet. A. The main line east of Liberal, yes, sir, the 379 million Mcf.

Q. I am sorry, 379 million Mcf. A. That is right.

Q. You have broken that down, have you, between the supply from Trunkline and the supply from Panhandle? A. Yes, sir.

Q. Are the figures in the last two lines, namely from Trunkline and Panhandle, independent of the figures in line 1? A. No, not necessarily. They tie in if you take the total deliveries balanced with the total supply.

Q. Let's take the month of February 1956, to see how this thing works. You show total deliveries of 33,913,100 Mcf. You show 1 billion feet out of storage.

3157

A. Yes, sir.

Q. So you would deduct that from the 33,913,100 wouldn't you? A. Yes.

Q. And that sum should balance with the last two lines, namely, from Trunkline and Panhandle? A. That is correct.

Q. This is merely a monthly inventory, so to speak, of the system through this two-year period. Isn't that right? A. Yes, sir. We have prepared this in compliance with Mr. Flax's request at one of our previous hearings.

Q. In preparing this, you started off with a balancing in storage of 11 billion feet on January 1, 1956. That was furnished to you, as I understand it, by Mr. Morton. A. Yes, sir.

Mr. Wirth: Pardon me, but shouldn't that be 12 billion if your balance is at the end of the month? If you took out a billion in January.

The Witness: At the start of January it should have been 12 billion, that is right.

By Mr. Shannon:

Q. You took out a billion during January, so that left you with a balance of 11 billion at the end of the month. A. 11 billion cubic feet, yes, sir.

3158

Q. You took out another billion and got down to 10 billion? A. Yes, sir.

Q. You had certain control factors in setting this up, did you not? A. Setting what up?

Q. Setting up this monthly balance into and out of storage. A. I assumed that the people who worked on the storage end of it had certain control factors, yes.

Q. Were you given these vloumes to be put into storage and taken out? A. Yes, sir.

Q. I see. In other words, you haven't gotten into the detail of what maximum balance you can use and so forth? A. No, sir.

Q. That is the storage witnesses who cover that? A. Yes, sir.

Q. And you simply have taken their figures and matched them against your total deliveries by months and your vol-

umes from Panhandle and Trunkline? A. Yes, on the total gas available from the capacity proven up in these proceedings.

Q. What line represents the balancing figures on making up this schedule? You started with certain fixed figures and

3159

you had to balance out. Where are the balancing figures? A. If you want to call my figure a balancing figure—I don't know whether you would call it balancing or not. These figures are always gotten more or less individually, but if you want to call it a balancing figure from the standpoint of this exhibit, it would be the total deliveries less the gas from storage, less the gas from Trunkline, the balance would be from the west end of the line. But I don't think we can say any of these are necessarily balancing figures.

Q. Your total deliveries come from Sheet 1 of Exhibit 135-A? A. That's right.

Q. As I understand it—correct me if I am wrong—the volumes shown on Exhibit 135-A, page 1, represent sales. They don't represent any curtailment of sales. They represent the volume of gas which you expect to sell. A. They represent sales and deliveries, other deliveries, company use, unaccounted for.

Q. But my point is, Mr. Farley, that the figures you show on Sheet 1 of Exhibit 135-A haven't been limited by the volume of gas available to the system from the west end and from Trunkline. A. Maybe not exactly limited, but they come pretty close.

Q. How about your summer load?

3160

A. That comes very close, too, to the amount of gas that would be available under the capacity proven up in these proceedings.

Q. Operated at what system factor? A. We haven't determined that definitely. Our capacity in the summertime, of course, drops off, compared to the capacity in the wintertime. So it is tied in in part to Mr. Hanna's design capacity with respect to summer and winter capacity. So we have worked out by months the capacity that would be available for sales from Mr. Hanna's design, and this substantially equals that capacity.

Q. Do the figures shown as purchased and produced from Trunkline include any of this new expansion that Trunkline has filed for in Docket G-8664? A. No, sir.

Q. Is that the difference between Exhibit 135-A and Exhibit 135 that was previously marked? A. Yes, sir.

Q. And any questions we may have with reference to the balances in storage, the rate of input and output, should be directed to your storage witnesses rather than to you? A. Yes, sir.

Mr. Shannon: Those are all the questions I have, Mr. Examiner.

. . . . . .

3186

By Mr. John McGrath:

Q. On transcript 3061, Mr. Farley, discussing the relation between Exhibit 80 and Exhibit 27, you stated there

3187

were no changes in the general service customers but there may have been some slight change on the 7-A. Was there a change? A. I believe there were some slight changes between the time we filed the original application, the volumes shown in Exhibit I, and those shown in 27. We obtained some later information. I think particularly with respect to Town Gas Company.

Q. That was just for those specific companies I just named? A. That's right, the 7-A applicants.

Q. There was some discussion here on your cross-examination by Mr. Wirth and Mr. Shannon as to the availability of gas for your direct sales customers. On your firm contracts with those direct customers, is there any penalty provision in there if you do interrupt sales to them? A. Yes, on some of them.

Q. So if you are unable to serve them with gas, Panhandle will be subject to a penalty. Is that correct? A. Yes, sir. I might say that that penalty is a reduction in price during the month the gas is curtailed.

Q. That is the only penalty provision you are aware of? A. Yes, sir.

3188

Presiding Examiner: Mr. Farley, do you recognize as a matter of law that the firm direct industrials in the event of a shortage of gas are to be curtailed before the resale customers?

The Witness: You say as a matter of law?

Presiding Examiner: Yes, or Commission order.

The Witness: I recognize that by the tariff, priority of service, they are curtailable, yes, your Honor.

By Mr. John McGrath:

Q. In that connection you spoke of some 18 million being available for the direct customers. Is that the right figure? A. That is what is left over, yes, sir.

Mr. Wirth: I didn't know there was anything left over.

The Witness: That is on the basis of the figures that we have been going over.

Mr. Wirth: Will you pardon me for a moment?

Mr. John McGrath: Sure, go ahead. I got that figure when you were cross-examining.

The Witness: We have a capacity of 1,260,534 Mcf. We had requirements, which are the sum of the contract demands equal to 1,242,457 Mcf.

Mr. Wirth: But that is on the basis of reducing the deliveries to Michigan Gas Storage and Ohio Fuel Gas.

The Witness: That's right. That is the 18,000 Mcf.

3189

Mr. Wirth: But you just recently testified you didn't propose to renegotiate those contracts.

The Witness: That's right. We don't propose to renegotiate the Ohio Fuel or Michigan Gas Storage contract. But on the basis of the capacity in these proceedings, we don't have the capacity for the full 160 million.

Mr. Wirth: You wouldn't have 18 million excess capacity for direct sales on the basis of your present outstanding contracts?

Mr. Miller: May we have the question read, please?

Presiding Examiner: Read it, Mr. Reporter.

(Question reda.)

The Witness: No, we would not.

Mr. Wirth: Thank you, Mr. McGrath.

By Mr. John McGrath:

Q. As I understand, to carry that just one step further, under your present contractual obligations to Ohio Fuel and Michigan Gas Storage, you will be short 60,000 Mcf. Is that right? A. That's right.

Q. Would it be your opinion that the 18,000 Mcf should be distributed between those two customers rather than to the direct sales customers? A. That 18,000 Mcf doesn't come into the picture under these proceedings.

3190

Q. I thought there was an extra 18,000 there and under your present capacity, the present gas available, you would have to short Ohio Fuel and Michigan Gas Storage by 60,000. A. Mr. Wirth is bringing in the present agree-

ments which total 160,00 compared with only 100,000 Mcf available under the capacity proposed in these proceedings, or proven up in these proceedings. That is where he got the 60,000 short.

Q. Under the 100,000-available, is there still 18,000 available for your direct sales customers? A. Under the 100,000 Mcf available there is 18,000 Mcf available, yes, sir, for the direct sales customers.

Q. Then is it your opinion that Panhandle should distribute that 18,000 to Ohio Fuel and Michigan Gas Storage in order to perhaps limit their penalties under those two contracts rather than break up this 18,000 among your various direct sales customers? A. I think that matter will be up to the Sales Department what they want to do about it.

Q. But that choice will have to be made, will it? A. I don't know whether it will necessarily have to be made.

Q. Somebody has got to decide where this 18,000 is going. A. I think somebody will have to decide.

Q. Because it won't make all of them happy. It won't

meet all the requirements of all of those customers that are going to be shorted. A. I don't think you can make all the customers happy no matter what you do.

Q. That is possibly true. But if you had the capacity and the gas available under your original application here, you would have at least met the estimated requirements that you have set forth in Exhibit I of your application, would you not? A. Yes, sir, if we had it, we would.

Q. Do you know who might be able to tell us what position Panhandle will take towards the distribution of this 18,000 Mcf that appears to be available? A. I think Mr. Keefe might tell you.

Q. I would like to be able to do this as quickly as we can.

I would like to have you indicate on Exhibit 27, Mr. Farley, your direct industrial customers, those customers who are presently using the gas for boiler fuel; and if on an interruptible basis, what their standby fuel is if you know, and the price that they are presently paying for the gas. A. I don't have information on their standby fuel.

3192

Q. Do you know those that are using it for boiler fuel? A. No. I gave some prices on the gas this morning.

Q. On just the Michigan direct customers, as I recall. A. I have information on the prices.

Q. Who would have that information, if you know? A. Where gas is being used for boiler fuel? I think probably one of the industrial engineers in the sales department.

Q. I believe this gets back to one of my original questions, Mr. Farley. Your estimates of these various things, then, are based primarily not on your personal knowledge of the various installations, the actual customers, but merely upon a group of figures that you have compiled or have been given to you?

Is that correct? A. Based on our past experience of what these customers used.

Q. If and when you sell gas to the power plant of the City of Fulton, what price would you charge them if it were to be under the present proposal as set out in Exhibit 80? A. They have discontinued using gas at that power plant. I doubt if they will use any. I don't know whether we have a contract on it.

Q. Why did you include them here then? A. Because they had used gas in the past and in

3193

our original exhibit—I think Exhibit I, I believe there is some information on there.

Q. It wasn't just to make me feel good, was it? A. No, sir. With the City of Fulton, we do have a contract dated August 8, 1950, 22 cents a thousand.

Q. I will just take these power plants. Missouri Power and Light Company. A. 28 cents a thousand.

Q. Are these up-to-date prices, those under your new proposed rate as reflected in Exhibit 80? Is that correct? A. We have assumed the same prices.

Q. Incidentally, for this Exhibit P in your pending docket application——

Mr. Keefe: Mr. McGrath, I think you are confused. Missouri Power and Light is a direct sales, not made under the new tariff provision. It is made under a separate contract and the rate is 28 cents.

By Mr. John McGrath:

Q. Northeast Missouri Electric Power Coop? A. 28 cents.

Q. What does Mrs. Tucker's Products use natural gas for, if you know offhand? A. According to my notes here, part of it is for steam generation and processing foods.

Q. What is the price to the Anderson Clayton and

Company? A. Firm gas, 35 cents per Mcf. Interruptible gas, 30 cents per Mcf.

Q. The Central Illinois Electric and Gas Company? A. 26 cents per Mcf.

Q. The Central Illinois Light Company? A. I don't have that new contract. I don't know what the price is.

Mr. Keefe: 26 cents per Mcf.

By Mr. John McGrath:

Q. The power plant at Jacksonville? A. 28 cents per Mcf.

Q. Morton? A. 30 cents per Mcf.

Q. Roodhouse? A. 28 cents per Mcf until December 1, 1954, and 30 cents per Mcf after December 1, 1954.

Q. So at present it is 30 cents? A. Yes, sir.

Q. The Illinois Rural Electric Company? A. 30 cents per Mcf.

Q. Do you know what this Laclede Christie Company is? A. It is a drain and sewer tile plant.

Q. What do they use the fuel for? A. I imagine the manufacture of the tile.

3195

Q. This Marblehead Lime Company, do you have any idea what they use it for? A. In manufacturing lime.

Q. Do you know what fuel the Clay City Pipe Company is presently using at Mecca? A. No, sir.

Q. You gave us the prices in Michigan. These estimates for Monroe Paper Products Company, were they based upon the evidence which was presently in Docket G-2050, or are these your estimates? A. My estimates, based on my conversations with the sales department.

Q. Do you know whether or not a specific study was presented in Docket G-2050 as to the requirement of the Monroe Paper Products Company? A. I don't know.

Mr. John A. McGrath: Mr. Examiner, that is all I have.

It appears there is additional information I would like to have as to boiler fuel, but I suppose we will have to meet that when we come to the question as to which one of these various policy witnesses and information witnesses are going to get on the stand.

Presiding Examiner: Very well.

Staff counsel?

Mr. Sisson: Mr. Examiner, might I interrupt just a

3196

moment before Staff begins their cross-examination.

Mr. Flax: Yes, sir.

Mr. Sisson: In view of the questions asked by Mr. Wirth, and by Mr. McGrath, I feel compelled to ask one more question, Mr. Farley.

Presiding Examiner: That is all right.

By Mr. Sisson:

Q. I don't want to take part in the discussion of the deficiencies and the confusion and so forth that was discussed previously, but I would like to clear up what I consider some loose language during the questions or answers. That was with reference to the figure shown on page 7 of Schedule 2, Exhibit 27, the figure being 1,352,457. That is the total of the first column. That, of course, does not represent contract demands of Panhandle's customers, does it? A. It does not represent the present contract demands of Panhandle's customers.

Q. But, on the contrary, represents Panhandle's estimates of customer's requirements and the amounts at the time the exhibit 27 was entered into evidence, that Panhandle was willing to serve?

Mr. Wirth: The heading of that sheet says "Tabulation of contract Demands."

A. Tabulation of contract demand which we proposed to

make effective November 1, 1955, in column 1.

By Mr. Sisson:

Q. They are proposed by Panhandle, is that correct? A. It was to show the contract demands as related to their requirements, that they would require those contract demands as of that date.

Q. However, the actual contract demands which are still in effect are shown as the total in the last column of the page, being 990,758 Mcf. Is that correct. A. Of course I

would like to point out there that the 990,758 Mcf does not include the Louisburg Lateral on Gas Service Company.

Q. That's correct.

. . . . . .

By Mr. Flax:

3226

Q. Mr. Farley, as I recall with regard to Missouri Power and Light service, you mentioned there was 1500 Mcf to be sold on an interruptible basis and 3500 Mcf that could be sold on a dump basis. Is that correct? A. That's right. I might clarify that. The contract provides that from April 30 to October 31, which is the off-peak period, 5,000 Mcf interruptible. During the period October 31 to April 30, 1,500 Mcf interruptible, 3,500 Mcf of dump.

Q. And to your knowledge in both instances the same use would be made of the gas, is that correct? A. Yes, sir.

Q. And that use would be for boiler fuel for power production, is that correct? A. Yes, sir.

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3237

By Mr. Shannon:

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3239

Q. Mr. Farley, in the light of certain questions asked you by Mr. Wirth, I wanted to ask you a couple of questions which may sound a little repetitious, but I want to get clear on the record on a couple of matters.

Your Exhibit 27, Schedule I, sets forth the requirements of the customers, except of course you show a cutback to Michigan Consolidated that we don't agree with, but that is clear on the record.

Apart from that you show the requirements of the customers as distinguished from your estimated sales. Am I right on that? A. Yes, sir.

(3239)

Q. Whereas on Exhibit 80 you show your estimated sales as distinguished from your customer requirements?, A. That's correct.

Q. Without taking time, I have made a comparison in 1956 of the sales that you show, and taking sales for resale on Exhibit 80, for the year 1956, you show total resale sales of 327,642,300 Mcf, as compared to on page 3 of Schedule 1 of Exhibit 27, sales for resale requirement as 351,123,400 Mcf.

3240

I compute a difference of some 13 billion 480 million cubic feet.

Assuming the correctness of my arithmetic, is it correct for us to conclude that you propose to sell in 1956 some 13½ billion feet less than your customers' requirements? A. I believe the difference is about 23 million.

Q. You are correct, it was— A. Million cubic feet.

Q. That was my computation. I am obviously wrong. 23½ billion feet less sales than customers requirements. Am I right on that? A. Yes, sir.

Q. And that is without reflecting any requirements, the difference between your present deliveries to Michigan Consolidated and the cutback or reduced volumes, isn't that right? A. That's right.

Q. And that would add another 14½ approximately billion cubic feet to your requirements? A. Yes, sir.

Q. Which would mean that you propose to serve some 32 billion feet less in 1956 than your customer requirements. A. Based on the assumptions you have made, yes, sir.

Q. And coming over to 1956, you show proposed sales on Exhibit 80—these are sales for resale—of some

3241

339,717,300 Mcf, and on Exhibit 27, page 3 of Schedule 1, you show requirements of your resale customers in 1957

of 360,871,900 Mcf. I compute the difference to be there some 21 billion cubic feet. A. Yes, sir.

Q. If we add in the 14½ billion feet approximately of the cutback to Michigan Consolidated, would it be correct that you propose to deliver in 1957, some 35½ billion feet less than your requirements of your customers? A. Based on your assumption, that is correct.

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3245

By Mr. Shannon:

Q. Mr. Farley, would you refer to Sheet 2 of Exhibit 135-A. You will note on the last line of that page that when Panhandle has total deliveries as shown for the year 1957, it is estimated that Panhandle would purchase and produce 305,223,300 Mcf. Is that correct? A. Yes, sir.

Q. If you would refer to Mr. Hinton's Exhibit 73-A for identification, page 1, which is the summary page, you will note in line 4, in the column headed "Grand Total (f)" Mr. Hinton shows for the year 1956 production or availability of natural gas to Panhandle of 308,407,000,000 cubic feet. That

3246

figure, of course, is larger than the Panhandle requirement shown for the year 1957 on sheet 2 of Exhibit 135-A. Is that not right? A. Yes, sir.

Q. In other words, Panhandle according to Mr. Hinton's study, would have available to it in 1956 the volumes of gas which it would need in order to make the deliveries which you estimate for the year 1957. That's correct, is it not? A. As far as gas available is concerned.

Q. And the Trunkline supply is approximately the same for years 1956 and 1957, is that not right? A. Yes, sir.

Q. So that it is correct, is it not, that in the year 1956, assuming the authorization of facilities covered by the

present application, Panhandle in 1956 would have the pipeline capacity and the available gas to make the deliveries in 1956 which it shows for the year 1957? A. It would have the gas available. I don't know with respect to the pipeline capacity.

Q. Doesn't your Exhibit 135-A assume that all of the facilities covered by this application will be installed and in operation prior to the first of the year 1956? A. Yes, sir.

Q. So that you would have in addition to the available gas, the facilities to deliver in 1956 the larger volumes which

you show as being delivered in 1957? A. I can't say that we will, no, sir.

Q. What will prevent you from having it, Mr. Farley? A. The capacity of the system.

Q. Is the capacity of the system going to increase from 1956 to 1957? A. Not that I know of. In the development of the figures in my exhibits, I had gas available east of Liberal for sales in 1956 of 358 million Mcf. In 1957, 370 million Mcf, and those are the starting figures that we were working with.

Q. You said you had those figures. You mean somebody gave them to you? A. Yes, sir.

Q. Mr. Hinton testified that the requirements that he was to show for Panhandle production were furnished to him by you. A. That's right. For 1956 we furnished Mr. Hinton the total gas requirements east of Liberal of 281,627,600 Mcf. Mr. Hinton made an estimate of the requirements west of Liberal, sales of 1,227,200 Mcf, fuel shrinkage and company use, 9,324,900 Mcf, unaccounted for gas, 847,200 Mcf, making a total gas requirements of 293,024,900 Mcf as shown on Sheet 2 of Exhibit No. 135-A.

Those are the figures that were furnished to Mr. Hinton.

3248

Q. I understand that.

Now what I am trying to pin down, Mr. Farley, is who made the decision in the Panhandle organization. Mr. Hinton tells us that you gave him figures, and you tell us now that you started with a figure of 358 million east of Liberal in 1956 and 370 in 1957. A. Yes, sir.

Q. That difference is exactly the 12 billion a year that I am talking about. A. Yes, sir.

Q. As I see these figures you are showing here, you have the same capacity in 1956 as in 1957. You have got the gas available to you. You could deliver the additional 12 billion feet to your customers in 1956 as well as in 1957. My question is: Who in the Panhandle organization decided that you would deliver 12 billion less than you could? A. I don't think that was the decision that we would deliver 12 billion less than we could.

Q. We have already earlier established that according to your own showing, a comparison of your customers' requirements on Exhibit 27 and your sales on Exhibit 80, you are failing to deliver your customers' requirements by 23-plus billion feet. That is even without the cutback at Detroit.

With the pipeline capacity and the gas supply, why don't you show the delivery in 1956 of the same volumes as you show

3249

in 1957. That would take up 12 billion of the deficiency. A. I might state that in working these figures out originally, we started with some rounded figures. I worked this out with Mr. Morton, which showed that we would have available, including Trunkline, 393 million Mcf for all purposes. Used and unaccounted for, 32 million; into Waverly, net, 3 million Mcf, leaving a balance availal e for sales in 1956 of 358 million Mcf.

(3249)

For 1957, the starting figure available for deliveries, 404 million Mcf; used and unaccounted for, 32 million Mcf; net into Waverly, 2 million Mcf, leaving a balance available for sale of 370 million Mcf.

Those figures are a part of the total shown on sheet 2 of Exhibit 135-A in the amount of 293,024,900 Mcf for 1956, and 305,223,300 Mcf for 1957.

Q. I appreciate that, Mr. Farley. But tell me, who gave you the 393 million that you started with in 1956 and the 404 million Mcf you started with in 1957? A. I told you I got that from Mr. Morton in working these figures out.

Q. Do you know what the basis upon which Mr. Morton decided that your total deliveries in 1956 would be some 12 billion less than total deliveries in 1957 is? A. I don't know all the details leading up to that, no, sir.

3250

Q. You didn't participate in the discussions which led to that conclusion? A. No, sir.

Q. And you are unable to offer us any explanation as to why, with an unsatisfied requirement according to your own showing, you don't deliver in 1956 as much as you deliver in 1957? A. I understood that that is all that would be available, or substantially all that would be available for sale.

Q. Do you know why—that is my point? A. No, sir.

Q. You would agree, would you now, Mr. Farley, that the deficiency of 38 billion in 1956, which includes the proposed cutback of 14½ billion at Detroit, could be met by delivering in 1956 the additional 12 billion we have been talking about, not selling 16 billion to your direct customers on an interruptible basis, and not exporting to Canada the additional 10½ billion that is the subject of this proceeding? A. Assuming we had the 12 million available in 1956.

Presiding Examiner: The answer is Yes?

The Witness: Yes.

Mr. Miller: Making the other assumptions that Mr. Shannon made?

The Witness: Based on those assumptions.

* * * * * * * * * *

4199

Gavin H. D. Martin

recalled as a witness, having been previously duly sworn, was examined and testified further as follows:

Direct examination

By Mr. Ackerman:

Q. Do you have before you Exhibit No. 140 for identification? A. I do.

Q. Was this exhibit prepared by you?

4200

A. It was.

Q. Would you explain very briefly what this exhibit shows and how it was prepared? A. Taking the contract volumes laid out in the 1954 contract between Panhandle and Union Gas Company, the deliveries are divided into two sections, that is summer and winter, summer being April 1 to October 31, and winter, November 1 to March 31.

The two periods have a total of 214 days, and 151 days respectively, and by dividing the contract volumes by the number of days, using the peak delivery which is 55 million per day——

Presiding Examiner: 55 million what?

The Witness: 55 million cubic feet per day, we find that in the first year, 127 days will be sufficient to take the volume of gas, and 64 days in the winter time, which leaves 87 days free in the summer period, and 87 days free in the winter period.

That carries through for the six years.

(4200)

Mr. Ackerman: I have no further questions of Mr. Martin on direct in connection with this exhibit. I would move that it be admitted along with the others when the appropriate time comes, and we now offer Mr. Martin for cross-examination on this exhibit as well as the other material that he testified to on direct.

4201

Presiding Examiner: The Examiner will reserve ruling on Exhibit No. 140.

Mr. Jerome J. McGrath: One question for clarification, if I might, Mr. Examiner.

He spoke, for example, of the figure 87 under the column "First Year, 87 free days."

What do you mean by that?

The Witness: That means 87 days on which no gas would be taken from Panhandle.

Presiding Examiner: Is there cross-examination by Staff Counsel?

Mr. Flax: If I may, Mr. Examiner, I would like to defer to the other parties.

Presiding Examiner: Mr. Morley?

Mr. Morley: I have nothing.

Presiding Examiner: Mr. McGrath?

Cross-examination

By Mr. Jerome J. McGrath:

Q. Mr. Martin, let's turn first to Exhibit No. 140, and see if I understand this correctly.

If Panhandle is to deliver the maximum quantities of gas to Union during the period April 1 to October 1, Union could only take gas for 127 days? A. No, that is if Panhandle chose to make deliveries at the peak contract rate, 127 days would be all that was

4202

required to deliver——

Q. To deliver this gas? A. That is right.

Q. But as a matter of operation, Union could take those peak quantities in excess of 127 days, is that correct? A. Not the peak, no. You see, there is a stipulated volume. If it came at a uniform rate, it would be 214 days to take that quantity, but if Panhandle chose to use the maximum rate, we could take it on 127 days, and leave 87 days free for Panhandle to deliver gas wherever it wanted to, other than to Union.

Q. And as time passes, the number of days on which it can deliver the contract quantities are greater. By the sixth year, it is 187 days? A. That is correct, because of the graduation in the volumes.

Q. In the volumes in the contract—the contract volumes? A. That is right. The sixth year is the maximum.

Q. What is the reason for submitting this exhibit, just to show that Panhandle could deliver gas in other periods?

Mr. Ackerman: Mr. Examiner, I thought I made clear when I made my introductory remarks that the reason for this exhibit was to clarify Mr. Martin's testimony on direct, during which he referred to the number of days during the winter

4203

period, and I believe during the summer period as well, when Panhandle would not be obliged to make deliveries because of the way the contract was worked out, and we wanted to put this in so that that would be pinned down, and you could have a precise picture of just what the story was.

By Mr. Jerome J. McGrath:

Q. How many days a year do you assume deliveries from Panhandle? A. The assumption of course is we would take

a uniform rate within the meaning of the contract. If Panhandle wished to back-off, Panhandle would back-off. That is the contract set up.

Q. But you aren't saying at this time what you estimate now to be the number of days on which natural gas would be delivered? A. These are the number of days which could be free if the contract was applied that way. If it weren't, these figures could vary.

Q. Under your proposed plan of operation, how many days of the year do you plan taking natural gas from Panhandle—how many days do you anticipate receiving it, every day in the year? A. No, because the contract specifically states that they have that leeway, and we are prepared to take all our deliveries and make our deliveries for certain periods from storage.

4204

That is, we are not limited to a fixed delivery date in the winter. As long as we have the volume, we don't need it on the day, that is the point.

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4314

Thomas Weir

recall as a witness, having been previously duly sworn, was examined and testified further as follows:

Cross-examination

By Mr. Morley:

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Q. Now, Mr. Weir, you have made quite clear in your prior testimony that for your own purposes, and in fairness to the communities which you propose to serve, you

would require a 20-year unconditional permit to pretty much assure you that you would get the gas in the volumes contemplated by your agreement with Panhandle. Now, is it your understanding that it will be possible under the Natural Gas Act for you to get such an unconditional 20-year assurance that the volumes, deliveries would not be interrupted or curtailed? A. It is our understanding that we can get a permit which may have conditions in it, but which we may feel that we can go ahead and arrange financing. We are operating under a permit now which has certain conditions in it.

Q. Well, that is right, and you have reference to the 1944 contract under which you are presently receiving deliveries? A. That is correct.

Q. Would a permit with a similar condition in it be satisfactory to you? I understood that it would not?

Mr. Shibley: I object to this, Mr. Examiner. Mr. May, who was representing Michigan Consolidated at the time Mr. Weir was first here asked these specific questions, and they are

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already in the record with complete answers.

Mr. Morley: Mr. May was not here, as the record will show.

I have been over the record.

Presiding Examiner: The objection is overruled.

The Witness: The decision in that connection wouldn't be one for me personally to make. It would have to be a decision the Board of Directors would make.

By Mr. Morley:

Q. Your decisions in this connection are pretty much as you have explained them, and you would not have different views with respect to the type of authorization which you would require, is that right? A. Well, we feel that the ar-

rangements for delivery are such that we can live with the conditions in the contract now, that is as to delivery of gas in volumes, so much in summer and so much in winter.

If that were substantially changed, it would affect the economics of the whole project, considerably.

Q. Under the contract of April 21, 1954, Exhibit No. 58, in Article 3, sub-paragraph 2-C, there is reference to the obtaining of governmental approval in addition to Federal Power Commission approval following the importation of these volumes of gas.

To your knowledge, Mr. Weir, are there any authorizations

in addition to the FPC authorization which are required to be obtained by you?

Of course you don't have to get the export authorization, Panhandle does? A. My recollection is that there was some question in our mind as to whether or not the Dominion Government in Canada would have to be asked for approval of the import of the gas. There have been several changes in legislation over the past few years, and we were uncertain as to what legislation might be in effect at the time.

There has in fact been a further change in legislation at the last session or current session of the Parliament in Ottowa, which would necessitate that we obtain consent to the importation of the gas.

We have already spoken to the responsible Minister, and he has assured us——

Mr. Jerome J. McGrath: I object to that, Mr. Examiner. We are going into hearsay evidence as to what the Trade Minister told him.

Presiding Examiner: It is going beyond the scope of the question, Mr. Weir.

The Witness: Very well, sir.

By Mr. Morley:

Q. You haven't obtained that authorization yet, I gathered from your partial answer?

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A. We haven't obtained it. We have discussed the probability that we would want it.

Q. It is evident from Exhibit 59, Mr. Weir, that preference is being given to Trans-Canada over Panhandle with respect to your obtaining additional volumes of gas. What is your understanding, Mr. Weir, with respect to the reasons for affording Trans-Canada such a preference? A. That was done practically on the insistence of a Minister of the Cabinet at Ottowa who has been supporting the idea of the whole Trans-Canada Project, and it was done with the definite intention of enabling markets to be built up in Eastern Canada so that it would help the economic possibility of the Trans-Canada Project.

It was discussed fully with Panhandle, of course, and they agreed to it, as indicated by Exhibit 59.

Q. When you refer to a special Cabinet Member, to the extent that you know, is that more or less a matter of policy of the Dominion Government to promote this all Canadian Line? A. Well, at the time I speak of, we had reason to believe that it was, because of this particular Minister's support of the project. As it so happened, since then the question of financing has come up, and at least to the extent that the Dominion Government for one reason or another was not able to participate in the financing there, some doubt as

4331

to how far the Government is suporting the whole project.

Certainly they won't support it, apparently, to the extent of guaranteeing the financing of the company.

(4331)

Q. You are quite familiar, are you not, Mr. Weir, with these various efforts to have the Trans-Canadian Line built in Canada? A. If you mean I am familiar with them to the extent that we have been directly involved through negotiation with Trans-Canada, other than that I am fairly familiar with public statements published in the press, discussions which I have had with various people, some meetings I have actually sat in on.

I am afraid I am generally in the position of being accused of giving hearsay evidence, and I don't want to get in that position.

. . . . . .

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Q. Now, the plan here contemplates that you will use this new subsidiary, Ontario Natural Gas Storage and Pipelines Limited, for handling the Panhandle Gas.

Now, what is the principal reason for segregating these operations in the manner which is proposed, Mr. Weir? A. Well, the principal reason is that particularly after this contract becomes effective, that portion of the operations is entirely different and apart from what Union Gas Company has been doing, which has been mainly production, local transmission and distribution. It is our feeling now that we are going to get into a definite transmission and storage project, which can be readily divorced from the distribution operations, and local transmission, and it was also our feeling that as we are going to be dealing with other distributing utilities, it would be better all around if we divorced this whole operation from our own distribution operations.

4336

Q. There isn't any reason why Union, itself, couldn't perform these same operations itself, is there? A. No, there isn't any.

Actually Union will of course control Ontario Natural Gas Storage Company, and will probably arrange the financing for it.

Q. Ontario Natural will handle, as I understand it, only Panhandle Gas. Is that correct; in other words, the gas they transport and sell will be only Panhandle Gas? A. Panhandle, and of course if that is switched later to Trans-Canada, they might be handling both Panhandle and Trans-Canada.

Q. That is what I meant. It would be volumes of gas other than the local production and purchases of the Canadian operators in the area where you obtain your gas? A. That is correct.

Q. And why is it proposed that Ontario Natural will handle only Panhandle, or Trans-Canadian Gas? A. Because the reserves available to us locally are all required for the area which we now serve, and it is our feeling that those reserves must be maintained for the benefit of the consumers in the present area.

Q. In other words, it is the policy of Union of Canada to keep in its own system for the benefit of its presently served customers, all local gas which is committed to Union,

either its own production or purchases? A. That is correct, we feel that in a sense they have enabled us to pay for the gas, pay for the drilling, and they are entitled to the protection of those reserves so far as they can be protected.

Q. And that gas is cheaper than the Panhandle gas presently purchased and proposed to be purchased, is it not? A. No, I wouldn't say it is. It depends to what extent we can utilize our own production. Our own production would be cheaper if we can utilize it fully, but the gas we purchase isn't any less expensive than the Panhandle Gas.

Q. You previously referred, Mr. Weir, to some negotiations with your other affiliates in Hamilton, was it United Fuel's investment? A. No.

Q. And have those negotiations culminated in an executed contract? A. No, they haven't as yet. I think it was testified that a draft—not a draft contract, but a memorandum containing suggested provisions for a contract were submitted at a Board Meeting and considered by the Board Meetings, and the Board authorized the men bers of the Board, as a committee, together with the general manager of the operating subsidiaries, to negotiate a contract.

I believe I have with me an extract from the minutes. If

you prefer that to go in through Mr. Palin, he will have it.

Q. That was going to be my next question, about this Board action.

It has been some time ago since you last referred to that. Is there any difficulty about the terms of the agreement? A. None whatever.

Q. And the reason is simply that they haven't gotten around to executing the contract? A. We have had further discussions, even with Mr. Pinckard, General Manager of the operating subsidiaries. He knows exactly what is planned, and has indicated his approval of the arrangements suggested.

Q. And is it still contemplated that the rates to be charged will be those which are included here in one of the exhibits which has been presented I think by Mr. Palin? A. There has been no move, no action taken towards having final rates approved by the proper Ontario body, the Ontario Fuel Board. There is no thought in our mind at this time of suggesting, or requesting approval of any other schedule than that shown. We feel that that s the schedule which we will ask for when the time comes.

Q. And so far as United Fuel Investments Limited is concerned, that rate is the $2 demand charge and 43 cents per Mcf shown under Tab 13 of your Exhibit No. 60?

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A. That is correct. When I speak of the schedule we will ask for, I was thinking in terms of United Fuel, because I am a director of United Fuel. I should have said the schedule of United Fuel.

Q. And what is the situation with respect to the Dominion Natural Gas Company? Have you yet entered into an agreement with them? A. No, not so far.

Q. Ontario Natural has not entered into contracts with anyone else for the sale of gas? A. No one else, sir, absolutely.

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By Mr. Jerome J. McGrath:

Q. Mr. Weir, in response to Mr. Shannon to that question, you answered in the negative, and you go on further to state at transcript 708 that it would be a very short time —and this comences on line 17—"it would be a very short time before we would have to say to the customers that we can only see gas supplies in sight for only 4, 5, or six years in the future to satisfy what is on our line now."

Now, where did you get the figures, 4, 5, or six years' supply? A. We are continually studying gas supply of course, in relation to the market demand, and from these studies it is quite evident that unless we get additional supplies on a long-term basis, our storage might increase somewhat over a period of three or four years, and then from there we would start going downhill fairly rapidly.

In this contract that we are speaking of, we have, I think included something like 2 billion cubic feet which we esti-

mate would be required to take care of an unsatisfied demand in our

4343

own market at the present time.

We are not satisfying the demand in our own market right now.

Q. The fact of the matter is, isn't it, Mr. Weir, if you were to confine yourself, Union, to your own market area as shown on your map, Schedule 1 of Exhibit 60, that your local production and your existing supply from Panhandle, that you would be able to meet your market requirements there for upwards of 12 or 13 years, maybe 15 years? A. No, I wouldn't go so far as 15 years. If we went out to satisfy the market, I don't think we could do it, for, of hand, more than 8 to 10 years at the outside, unless something unexpected happened.

Q. How long—there was testimony in the record yesterday, I believe on direct, that Union has been serving natural gas in this market area since 1911, is that about right? A. Union Company was formed in 1911, yes.

Q. How long has natural gas been served in this area? A. I think the natural gas was first found in that general area around 1908.

Q. Well, is it not a fact, Mr. Weir, that natural gas having been in that area for such a long period of time that your potential for growth is pretty well exhausted? A. No, not at all.

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Q. How many permits do you have outstanding now for space hearing, let's say, that you are unable to serve, or would that be a proper question for Mr. Palin? A. I think I can probable give you some idea of it.

As of April 1, there were applications on file in our vari-

ous district offices for domestic heating, something in the neighborhood of 4750 applications.

In addition to that, we know there is commercial heating wanted. We haven't got applications on file for that, but we know there is some wanted.

Q. When you mention the 4750 permits, you mean in this area— A. London, West to Windsor, our present distribution area.

Q. And how many permits—I use the word for lack of a better one—were granted in 1954 for space heating customers? A. We issued permits—permits issued and permits in process at the time the last check was made, which was about March 31, totaled about 8700.

Q. Granted in 1954? A. In 1954 we were catching up on a big back log the best we could, and there were two purposes in view, but however, I perhaps shouldn't expand on that unless I am asked.

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Q. And is it your intention to notify the Board that you would take on the 4750 customers that presently are applying for service? A. The decision hasn't been made actually as to that yet, but there isn't the same urgency about it this year as there was last year.

Q. What is your recommendation?

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A. Well, the urgency last year was this, that we were being pressed with Trans-Canada supposedly coming through, there was a great deal of talk about building up the markets in the east, and we felt it was a matter of policy with the company that we should perhaps extend ourselves in getting some of the load on our system in anticipation of the larger volume of gas becoming available.

(4346)

Q. What is your recommendation for taking on these additional customers that presently have permits pending? A. I doubt whether we would take the 4700 on.

There might be some part of that that we would say we were willing to take, depending on where they are located, and on what the circumstances are, may be, in each case.

Q. When you say "depending on where they are located," do you mean whether or not the capacity of your system is sufficient to serve it? A. That is correct.

Q. So whether you have gas available, there is the question of whether you have capacity ot serve these additional customers, is that correct? A. We know we haven't the capacity to serve all the people who want gas.

Q. The answer to my question then is yes? A. Yes.

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Q. Now, you testified on direct, this in response to a question by Mr. Shannon, I believe, that you had agreed upon the thirty-five cent price in the Panhandle contract after conducting a study in your company as to whether you could sell that gas at that price in competition with other fuels. Do you recall that testimony? A. Yes.

Q. Was the five cent price the price that you offered to Panhandle? A. No.

Q. It was the price that Panhandle offered to you?

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A. The price that Panhandle told us they were willing to sell the gas for.

Q. Then you made your study on that basis ot see if it was feasible for you to purchase the gas at that price, is that right? A. Yes. We had already made studies, but when we learned the price ran to thirty-five cents, we reviewed them, and on the basis that we felt we could operate on that price, we agreed to it.

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4369

Thomas Weir

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Q. Has Union of Canada had representations from the Canadian government to the effect that it would be desirable for them to sign a contract with Trans-Canada? A. Yes, sir, we have.

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Redirect Examination

By Mr. Ackerman:

Q. Mr. Weir, yesterday in answering some questions on cross-examination, I believe by Mr. McGrath, you referred to the number of 8700 permits for house heating that were issued and the customers connected up, I believe it was in the last year. Is that correct? A. The last fiscal year.

Q. How many year's accumulation of demand did that 8700 figure represent? In other words, over how many years had the people involved in that number been trying to obtain gas from Union? A. I can't recall the exact year in which we first started taking on house heating after the war was over, when under the restrictions we couldn't take any on. But I have a very definite recollection that this 8700 is the balance that has been accumulated over a period of say six to eight years, at least, during which period we have taken on some small volumes each year, and that gradually accumulated until we had about 10,000 or slightly more than 10,000 applications on file.

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This was an effort to clean up those applications, see how many of them were still firm applications or how many may meanwhile have gone to other fuels, and also to start building load in anticipation of—again, it was partly to help the Trans-Canada contract, building load in anticipation of the Alberta gas.

But it had accumulated over a period, I am quite satisfied, of probably as long as eight years.

Q. Could you describe generally what the situation has been with respect to extensions of the Union Gas distribution lines into areas of potential demand at the present and over the past few years, during which this demand that has been accumulating has existed? A. We are continuously receiving requests from the various municipalities in which we are now serving gas, to extend our lines into new subdivisions, new areas, within these markets. We haven't been able to keep pace with those requests.

Q. Is it true, then, that at the present time, in addition to the unsatisfied requests for permits and service that you have on file, there are other potential customers in your service area who would like to have gas? A. Yes, there are, quite substantial numbers.

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Recross-Examination

By Mr. Jerome J. Mc Grath:

Q. Mr. Weir, this 8700 figure that you gave us yesterday and which you stated this morning it is your belief had accumulated over a period of maybe six to eight years, you are not saying, are you, that the 8700 customers waited six or eight years to get that gas? A. I say I think that

was the balance remaining out of an accumulation over that period. We have taken some customers on each year, but last year was the first year that we went nearly so far as that number.

Q. Union's Exhibit 61, Schedule M, shows the estimated analysis of sales by markets for the years ended March 31, 1952, 1953 and 1954. That indicated that the total meters on the lines have increased by about 3,000 per year. Isn't that right? A. It would be about right. I wouldn't quarrel with what the exhibit shows under any conditions.

Q. Your rate of attachment of customers has been fairly uniform in the past, hasn't it? A. It has been fairly uniform.

4394

Q. That is, each of these years seemed to indicate that it is about 3,000, or a little more than that, each year? A. That is so, but these attachments have been made under conditions of the necessity of obtaining permits and operating under restrictions.

Q. If you will turn to Schedule L of the same exhibit, No. 61, showing the number of meters, the percentage of attachment of new meters is just about the same as what your past experience has been, isn't it? A. I believe that was probably Mr. Palin's exhibit, and this is subject to what he may say, but I believe that is about the basis he used.

Q. Even if you were to get natural gas from Panhandle, your rate of attachment wouldn't be too much different from what it has been over the past several years, would it? A. These are the best estimates we could make as to what the future might hold. We have gone through the period of very substantial expansion. We don't know really what the future holds, and these are the best estimates we could make.

We have to base it on our past experience. We do know that at the present time there is an unsatisfied demand for extension of our system in each of the markets in which we are serving gas.

4395

Q. But so far as applications for space heating permits are concerned, you testified yesterday you had about 4750. Is that correct? A. Still unsatisfied.

Q. Union's Exhibit, Schedule L, shows that about 4,000 active meters will be attached per year, so that if this proposed operation should eventuate, shown on Schedule Q, then your backlog of customers will be entirely taken care of. A. The 4750 applicants for permits are not necessarily all our new extensions. A great many of those may be on our present system, but in addition to that, if we were able to extend our system, there would be new heating applications come in from those extensions.

We are quite satisfied that there are going to be additional heating applications made in this current year.

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4401

Frederick R. Palin

was recalled as a witness and, having been previously sworn, was examined and testified further as follows:

Direct Examination

By Mr. Ackerman:

Q. Mr. Palin, do you have a copy of Exhibits 142 and 143 for identification? A. Yes, sir.

Q. Were these exhibits prepared by you or under your supervision? A. Yes, sir.

Q. Would you describe very briefly just what these ex-

hibits are? A. Dealing first with Exhibit No. 142, that is a statement prepared as a result of a survey that was made by the company to determine the amount of interruptible industrial gas that would be available in the markets of the company.

This is only a partial list of what was determined at that time. There were other uses replacing coal and so on which were not considered to be advisable to even consider at this time. This is mainly to show the representative portion of the customers who did specify a desire for interruptible

industrial gas.

Q. Mr. Palin, still referring to Exhibit No. 142, does this exhibit represent a change in the testimony that you gave on direct examination with respect to essentially this same list of companies? A. Yes. I believe there is really only one change from the list of companies that I read into the record at that time. I was referring to a working sheet I had at that particular time, and I mentioned the name, I believe, of Kellogs. That does not appear on this statement.

The name I should have mentioned was Ontario Steel Products. I believe that is the only change in this list shown as Exhibit No. 142 from what was read into the record.

A. Exhibit No. 143 is a statement of a portion of the estimated annual available market for interruptible industrial gas for United Fuel Investments, Limited. It comprises five customers.

There, again, it is not a complete list of all the markets that would be available for interruptible industrial gas in the area, but is just a representative list of the higher-

4403

value uses that gas may be given to for interruptible purposes.

Q. Is Exhibit No. 143 the schedule that was requested by staff counsel? A. Yes, sir.

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Cross-Examination

By Mr. Morley:

Q. Mr. Palin, we might as well take up these last two exhibits while we are on that same subject.

With reference to Exhibit No. 142, how were these companies which you have there set forth selected out of your overall market? A. Our Industrial and Commercial Utilization Department made a survey of certain customers and certain customers came

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to the company requesting gas for interruptible purposes. This statement was compiled from the customers who made requests at that particular time.

We did not entertain the customers, serve them, who wished to obtain gas for boiler fuel purposes, replacing coal, items of that nature.

Q. On the first line you have "Fibreglas of Canada, Limited." Did they request that the Union Gas Company of Canada provide them with natural gas in any volume at all? A. Yes, sir, they are presently a customer of the Union Gas Company, and they use varying amounts from 6000 to 10,000 Mcf per annum. That is about their present

rate of take. They do use bunker "C" oil in their glass melting tanks.

From time to time they have requested that natural gas be made available for that purpose on an interruptible basis as being a superior fuel for the purpose and do a better job for them. So while they are customers of the company for some of their processes—minor processes—they do require a lar er volume to be made available to them.

Q. You say they presently purchase from Union 6000 to 10,000 Mcf per year? A. Yes, sir.

Q. Now, are they presently using Bunker "C" oil for melting glass, or is that for some other processing in the plant?

A. I understand the Bunker "C" oil is used in this glass-melting process. That is their main heat requirement, in the melting tanks.

Q. And the lehrs and that sort of thing which requires a continuous heat— A. Fiberglas manufactures glass insulation material. I don't think they would have lehrs. It is just a straight melting glass tank job.

Q. In the right-hand column, under "Annual Natural Gas Equivalent, Mcf," you have opposite that same company 640,440 Mcf. That simply represents, I suppose, the conversion of the annual oil consumption to natural gas equivalent? A. That's right; yes.

Q. That does not mean, does it, Mr. Palin, that they have requested that Union Gas Company of Canada supply them with 640,440 Mcf annually? A. No, sir. They have just requested that they would like to have the natural gas available for the purposes that they are now using the Bunker C to the extent of 3,480,680 Imperial gallons as the volume shown to us as their annual consumption.

They would like to replace that with natural gas on an interruptible basis.

Q. How firm a request, or evidence of desire, was expressed to you by Fibreglas of Canada, Limited? Was it in the form of an actual request for that volume of gas for

4406

total displacement of their oil? A. They have made requests, yes, sir, in the past for interruptible gas to switch their operation over from oil. Their present equipment in interchangeable equipment. They are ready to do it at any time.

Q. So that the burning equipment which they now have and in which they utilize Bunker C oil can also utilize natural gas? A. Yes, sir. It is interchangeable equipment.

Q. And are they willing to buy this volume of gas at whatever the price would be that you would charge, or haven't they put some limitation on what they are willing to pay? A. The actual price was not discussed, from the direct dollars and cents point of view.

Q. It is pretty obvious, though, that the price would have to be somewhere— A. Oh, yes, the price would have to compete reasonably close to the Bunker C price.

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By Mr. Morley:

Q. Would your last answer apply equally, Mr. Palin, to all of the other companies which are listed on Exhibit No. 142?

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A. Yes, sir. It would be a general answer to that question that the price for natural would have to compete with the type of fuel suggested as being replaced, and as shown on this Exhibit No. 142.

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Q. The Dominion Gas Company—I will make it a general question, Mr. Palin. Maybe it will shorten it up. Which of the companies listed on Exhibit No. 142 have actually requested of Union Gas Company of Canada that they provide them with a supply of gas sufficient to displace their oil consumption as reflected on your exhibit? A. As a result of the survey that was made, and the requests that came from the customers to the company, I think they could all be classed in that category, that they have requested in one form or another that natural gas be made available to them, either as a result of our going to them or the customer coming to us.

I might say that all these customers now use natural gas

in some of their operations.

Q. Does each of the companies here listed also have fuel-burning equipment which is convertible; that is, can presently utilize natural gas as well as the other fuel which they are presently using? A. I might just deal with those individually. Fibreglas is interchangeable. Dominion Glass is interchangeable. Polymer Corporation is interchangeable. Cabot Carbon is interchangeable. Dow Chemical is interchangeable. Greenmelk is interchangeable. General Steel Wares is interchangeable.

Dominion Forge and Stamping would require to be changed over. Ontario Steel would require changing over, conversion.

Proto Tool is interchangeable, and General Motors Diesel is interchangeable.

Q. However, I assume, Mr. Palin, you have entered into no agreements with any of these customers to provide them with the volumes of natural gas which you have reflected on your Exhibit No. 142? A. That is right.

Q. You do operate on negotiated agreements for volumes

of gas in the quantities here shown, do you not? A. At the present time, sir, we do not have any interruptible contracts. All our sales, industrial, commercial and residential, are made on the basis of the rates as set by the Provincial Government.

4409

Q. I remember, now, since you mention it, but on your large firm industrial, is that sold on the basis of negotiated contracts, or do you have a rate schedule that applies to these large volumes? A. The large volumes are set all by the one rate. There are no individual contracts for firm gas.

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Q. So that the purport of Exhibit No. 142 would be that you have a market showing a demand of 2,396,640 Mcf to supply which volume you have available one million Mcf?

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A. That's right; yes, sir.

Q. With respect to Exhibit No. 143, showing the interruptible industrial market in the service area of United Fuel Investments, Limited, were these data that you have reflected here obtained in the same manner as for Exhibit No. 142? A. Yes, sir.

Q. So you regard that in so far as the cost of natural gas would be in the range of the price of competitive fuels, that you could sell these volumes? A. Yes, sir. If those volumes were available, of course.

. . . . . .

Q. In this instance, is the fuel-burning equipment of each of the customers interchangeable for the use of natural gas, as well as the fuel presently consumed, which I think

in every instance here is Bunker C oil? A. The Dominion Glass Company, they now have the equipment available to convert from oil to gas. I might say that many years ago they did use natural gas for this particular purpose, and they switched to Bunker C oil because the natural gas wasn't available.

They do have the equipment. They estimate it will cost

them about $20,000 to convert all the equipment, to reinstall the equipment they now have. Burlington Steel, their present equipment is not set up to use gas, but there, again, they claim that it could be converted at a nominal sum. I don't know just the type of equipment they do use there, but they felt that that wouldn't be a stumbling block if the gas were available.

The same with Building Products and the same with Taylor Forge. And with the Steel Company of Canada, they do have several operations, of course, in which this natural gas could be used, and some of their equipment would have to be changed over to take natural gas.

Q. With respect to the Steel Company of Canada, Limited, where you show 30 million gallons of oil consumed, that is the total oil consumption for their entire operation, I assume? A. That is the oil consumption as given to us by the steel company now being used in the processes which could be converted to natural gas if the natural gas were available. They may use other oil in addition to that. I wouldn't be sure of that.

Q. The volumes shown on Exhibits Nos. 142 and 143 are, as I understand it, in excess of the volumes presently being delivered to the companies shown there? A. The volumes of gas being delivered by the gas company at the present time?

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Q. Yes. A. That is true with Exhibit No. 142. They are all customers at the present time. This would be additional gas required. So far as Exhibit No. 143 is concerned, the Steel Company of Canada is not now a customer. The others are in varying degrees.

Q. Is the reason that you are not presently delivering the volumes of gas here shown the fact that the gas is not available or a matter of price, or both? A. The gas is not available for these purposes. That would take care of the price factor at the same time.

Q. Was any inquiry made to determine whether or not these companies shown on Exhibits Nos. 142 and 143 would buy gas on a firm basis at firm rates if it were available? A. We didn't make a survey to that extent.

Q. This survey was made solely on the basis of interruptible volumes at rates lower than firm rates? A. Yes, sir, to replace these particular fuels now being used.

Q. You don't presently have an interruptible rate, do you? A. No. So far as the Union Gas Company is concerned, no. So far as United Fuel Investments, Limited, is concerned, they do have an interruptible rate. I think there is one customer, National Steel Car, I believe I mentioned before,

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is taking advantage of that, and that is only on week ends.

Q. That is more a matter of dumping gas, excess gas which you can't otherwise dispose of? A. Yes, sir, on week ends.

Q. What price of gas was mentioned in the survey of the Union Gas Company of Canada interruptible market in discussing the sale of gas to the customers shown on Exhibit No. 142? A. No definite prices were mentioned,

but the survey was made on the basis of cost to compete with the present fuels. They vary with the various customers, depending on the present source of supply of their fuel and the type of fuel they use. But a calculation was made to show at what price gas would compete on a straight Btu basis with the fuels now being used.

Q. Then, in other words, all that you did in connection particularly with Exhibit No. 142 was to determine what their cost of oil was, and then assuming that you could beat that price, it was assumed that you could sell an equivalent amount of gas? A. We knew that if we could meet that price, we would definitely get the business. We also knew they were anxious to get the natural gas and were willing to pay a slight premium at least over the competitive cost.

Q. And since all but two of the companies shown on

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Exhibit No. 142 have interchangeable equipment, I suppose that the length of commitment for service was not a particular factor in the matter? A. No, sir.

Q. Was that matter discussed with respect to the effect it might have on their contracts for the purchase of oil if they substituted in part natural gas? Was that gone into at the time of your survey? A. Yes, sir. The customers apparently took that into consideration at the time, because with the exception of about three of them, they are not what you would call large-volume annual consumptions.

Q. With respect to whatever the rate would be at which you would sell interruptible gas to the companies shown on Exhibit No. 142, would such a rate have to be approved by any regulatory body in Ontario? A. Under the present regulations, yes, sir, it would be.

Q. I suppose you haven't gone that far with this matter of making interruptible sales or discussing with the regulatory body what rates would be charged? A. No, sir.

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Q. With respect to Exhibit No. 143, the situation, I assume, would be generally the same as that you describe in connection with Exhibit No. 142, in that as I understand, you have to set up a whole new system of rates in the United Fuel market because of the changing over from manufactured to natural gas? A. That is right. We will have a complete rate schedule set up for all classifications in that market when conversion is made.

Q. And with Exhibit No. 143, I suppose the same assumption was made as in connection with Exhibit No. 142, namely, that if you could meet the price of oil, then you would have this market for natural gas? A. Yes, sir.

Q. And it was not assumed the price of gas would be either above or below, but would be the same as oil? A. The situation is much the same as in the Union. If we could meet the price or even a slight increase over the presnt fuel cost, that business would be available.

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Q. On Exhibit No. 143, you have a reference in Footnote 2 that you haven't included any conversion to natural gas of markets now utilizing bituminous coal.

Is there, in your opinion, such a market in existence in the Hamilton area for natural gas? A. There is a large consumption of coal there for steam purposes, and soap and textile processing mills there, which we know they would like to change to gas if they could get it. But we haven't entertained that at all as being a possible market for any of our gas for two reasons: The volumes that would be required and the price at which we would compete.

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Q. In connection with your industrial sales which we went through this morning a little bit, and you previously touched on in your direct testimony, you have discarded boiler fuel entirely. That is simply because of the limitation on the volumes of interruptible gas that would be available to you rather than for conservation or anything of that sort? In other words, you don't have any scruples as a company policy against selling boiler fuel? A. There are really three things that govern it—the two you mentioned, availability of gas and price; and the fact that a permit is required for the industrial use of gas from the Ontario Government.

At the present time we know they would not issue a permit for boiler fuel gas. So I believe that would be very much of a governing factor in the future as well.

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The Witness: So far as the sale of boiler fuel—if I understand the question—is concerned, the company does not contemplate any boiler fuel sales from any contracts or existing contracts that are entered into for the three reasons mentioned. There is not enough gas available under those contracts for that purpose, and it is very likely that any price that would compete with competitive fuels would rule the sale out; and the third one is that a permit for that purpose would have to be obtained from the Ontario Fuel Board, and it is very doubtful whether they would issue a permit for such purposes with only the volumes of gas available as indicated in the contracts referred to in Exhibit No. 60.

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Q. Turning now, Mr. Palin, to Schedule 5-A of your Exhibit 60 showing the estimated requirements of the cities of Kitchener and Waterloo and suburbs, there is presently being distributed there manufactured gas. That is correct, is it not? A. Yes, sir.

Q. And that is distributed by whom? A. The Public Utilities Commission of Kitchener.

Q. Is that true with respect to Waterloo? A. And the Public Utilities Commission of the City of Waterloo.

Q. What are those—municipally owned organizations? A. Yes, sir.

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Q. Does either Union or Ontario Natural Gas Storage and Pipelines have a contract for the sale of natural gas to these two communities? A. No, sir. The only items in writing between The Union Gas Company and the two Commissions are the letters as reproduced as Schedules 4-A and 4-B of Exhibit 60.

Q. And those letters are certainly not in your opinion, are they, firm commitments for the purchase of gas? A. No, sir.

Q. Turning to Schedule 5-B of the same Exhibit 60, Mr. Palin, covering the estimated requirements of the City of Guelph, that is presently receiving manufactured gas, is it not? A. Yes, sir.

Q. Is that also served by a municipally owned distribution system? A. Yes, sir.

Q. In this instance, Mr. Palin, does either Union or Ontario Natural have a contract for the sale of natural gas to this community? A. No, sir, other than the letter of intent shown at Schedule 4-C of Exhibit 60.

Q. The community of Stratford as shown on Schedule

5-C of Exhibit 60: Are your same answers applicable to this community? In other words, they presently receive manufactured gas?

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A. No, sir, there is no gas distribution in the City of Stratford at the present time. Union Gas Company has applied for, and the citizens of the City of Stratford have voted in favor of granting Union Gas Company, a franchise to distribute gas there. I believe that is set out at Schedule 4F of this Exhibit 60.

Q. Will it be necessary to install a new distribution system in this community in order to provide natural gas? A. In the City of Stratford, sir?

Q. Yes. A. Yes. There are some mains in the city at the present time from the former operations, but we don't anticipate they could be used to any great extent.

Q. So for all intents and purposes it would be necessary to construct an entirely new distribution system? A. Yes, sir.

Q. And that is true also with respect to the Town of St. Marys, is it not. A. Yes, sir.

Q. Is it proposed that Union or Ontario Natural itself would obtain a franchise and distribute the gas in this community? A. Yes, sir, in the name of the Union Gas Company, is the present contemplation.

Q. Would you say it would also be Union Gas Company in the City of Stratford? A. Yes, sir.

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Q. Of the amount which has been expended for the 12 months ended March 31, 1955, roughly how much do you consider at this time will be capitalized as representing the investment in productive acreage? A. The expenditure

on drilling productive wells for the year ending March 1955 will be approximately $225,000.

Q. So that your drilling results for this more recent period ending March 31, 1955, turned out better than for the previous 12 months ended March 31, 1954? A. During the year ending March 1955 there was more development drilling done. By that I mean developing areas where gas had previously been discovered. That compares with the larger expenditures in the previous year on exploratory drilling of wildcat areas.

So that's the reason why we have more expenditure on producing wells during the year ending March 1955 than we did in the year ending March 1954.

Q. So that you regard that your earlier expenditures

were incurred in part on locating productive acreage which was subsequently developed? A. Yes, sir.

Q. Mr. Palin, have any of the many new methods of drilling and completing wells been utilized by Union to better the acreage which they have already produced in the manner of recompleting wells and that sort of thing? A. I know our drilling, and at least our engineering and geological departments, from time to time deepen wells. I believe they are using the latest, most up-to-date instruments and methods to locate new areas.

As far as I know, they are doing everything of that nature to prove up the existing sources of supply.

Q. I was simply addressing these questions to you as a top management official, and to the degree that that type of information comes before you. What I have in mind is: Have these new developments of the type that I have mentioned in completing wells and recompleting wells and that sort of thing added to your reserve situation respecting local gas?

In other words, have they improved your position with respect to locally produced gas and reserves than over a previous period? A. As far as I am aware, they are using all the latest available methods to get the full development of new areas and to further extend existing areas to develop the maximum

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amount of reserves we can discover.

* * * * * * * * * * *

The Witness: Yes, I would say they have.

By Mr. Morley:

Q. With respect to the 12 months which will end March 31, 1956, do you have any amount budgeted for these types of expenses which we have been discussing? A. Yes, sir, as of Monday of this week, the Board of Directors of the Union company appropriated $500,000 as natural gas exploration and development program for the fiscal year commenced April 1, 1955.

Q. Generally, you understand, is any portion of that amount earmarked for the development of new acreage in a sense of wildcat drilling? A. In round figures, I would say that on the basis of the program submitted to the Board, at least 80 percent of that amount—at least 80 percent—is to be utilized for wildcat drilling; in other words, exploration drilling, as compared with development drilling.

Q. You are a director of Union are you not? A. I am not a director of the Union Gas Company, no, sir.

Q. In any event, it is certainly indicative that in the

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opinion of the management, there are areas which will be productive of newly discovered reserves which are not

now known or available to the company? A. On the basis of gravity survey and seismic work that is done and has been carried on in the past, there are still certain locations which our geological department feels warrant exploration.

Q. Referring to your Schedule L, Mr. Palin, of this same Exhibit No. 61, here again you have this first year. This is the first year commencing April 1, 1956, as you previously stated. A. Our market surveys were based that that would be the date on which the operations under the new Panhandle contract would commence.

Q. I think it was previously testified that Union connected in 1954 approximately 8700 new house-heating customers; that is correct, is it not? A. I understand that is the figure as closely as we can approximate it.

Q. Was that for the calendar year 1954? A. That would be our fiscal year ending the 31st of March 1955.

Q. You have set forth here the estimated new customers which you anticipate will be connected. In the event that no additional gas is obtained from Panhandle or Trans-

Canada, so far as the market now served by Union is concerned, would you continue to take on additional house-heating customers? A. Yes, I believe we would continue to take them on, but to a very much restricted degree as compared with what has taken place in the past.

Q. Simply because you caught up with your backlog and there is not the pent-up demand that there existed before? A. Yes, sir, and we would be required to restrict our distribution main extensions into present market areas, and that would preclude taking on additional customers.

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Q. In the event that additional natural gas is not obtained for the Hamilton area, I assume that the coke ovens owned by Hamilton by-product coke ovens will be maintained and continued in operation, will they not? A. Those coke ovens were built in 1924 and 1928, and they have practically reached the end of their economic life. So they can't be kept going for a great deal longer.

Q. Then your answer is that they have reached the point of obsolescence, where, irrespective of whether you get additional natural gas from any source, they will be retired.

Is that right? A. They are reaching that point. They haven't quite reached it yet, but they have very few years to go. They require a great deal of maintenance. Something is going to have to be done about it in the next, say, two years.

Q. So if is the opinion of the management at this point that if additional natural gas is not obtained, these coke ovens will not be maintained for a period longer than two years from now?

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A. Yes, sir.

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By Mr. Jerome J. Mc Grath:

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Q. I am not quite clear as to the present operations of Union and as regards the industrial sales. At the time of

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your direct you testified that all industries in Ontario were interruptible because of the directions of the Fuel Board. That is correct, isn't it? A. Yes, sir.

Q. You have so classified your industrial customers in your estimates here, or in your exhibits here, showing your

past experience as interruptible customers? A. Yes, for past experience.

Q. But as a matter of practical operation, these industries have been firm customers, haven't they? A. Generally speaking, although in 1948 we had to curtail due to weather conditions; and on one or two occasions during the war we had to curtail in extreme cold weather because there was not enough gas to go around. At that time we had to remove all the conversion burners out of the central house heating units.

Q. But for the most part they have been firm? A. Since 1948 we have had no interruptions in those.

Q. You are going to change these customers, if I understand your testimony correctly; and if you receive Panhandle gas or other gas from some other source, you are going to change these customers to a firm basis in your classifications, are you not? A. The Union Company feels that if additional gas is made available under the Panhandle contract or under the Trans-

Canada contract, there would be sufficient gas available over the foreseeable future that we can definitely consider that present industrial group of customers as firm customers, even though they will still require under existing legislation an annual permit from the Government of the Province of Ontario to use industrial gas.

Q. But in so far as your company books and your operations go, you will classify them as firm? A. Yes, sir.

Q. Whereas they are now classified as interruptible? A. Yes, sir.

Q. If you were not to convert these customers to a firm basis and you were to continue to serve them on a completely interruptible basis and taking into account the local production that you have and the existing deliveries of gas from Panhandle, would Union not be able to adequately serve its market territory without any additional gas from

Panhandle? A. Union's existing market area is not being entirely served at the present time. Extensions are being made as we can see additional gas available on a long-term period. By long-term period, it has been our policy to try to keep at least 15 years' supply of gas in sight when it comes to any particular expansion.

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Q. Based upon your 1955 operations, 1955 send-out, and your local sources of supply and the existing Panhandle deliveries, the company is presently assured of about a 15 year supply of gas, isn't it? A. I would say from the point of view of getting the gas to market as reserves and pressures in the various fields go down, of course, the annual send-outs would tend to taper off.

I think the ability to meet the existing market would be narrowed down to about 10 years.

Q. If you didn't serve these industrial customers on a firm basis, but interrupted them to meet your domestic and commercial space-heating load, your winter load, wouldn't that serve to augment your gas supply? A. Yes, to the existing customers, but I understood your question to be to the existing markets.

Q. I was confining my question to Union's existing market area. A. That is, as I understand it, but we are not serving our entire market area at the present time. There are many customers asking us to make extensions within our present franchise area that we are not able to serve. So that is really our market area. Those are the territories into which we can't expand on the basis of our present gas supply, even

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in the Union territory.

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Q. Of those conversion customers, what fuel is used

principally by them for space heating—anthracite? A. Our study in the City of Hamilton indicated that in the smaller type of home, the workingman's home, a great deal of anthracite coal, a small amount of coke, but in the newer homes, people with more substantial means, oil is the competition, and oil is what is going in now to a very, very high percentage of saturation, in the new homes being built.

Q. Would you say it is about a 50-50 split between anthracite and fuel oil that you would convert? A. Over a long-term period, yes. We feel the anthracite conversions and hard fuel conversions would be made sooner. The people who have oil-burning equipment, obviously have an investment in equipment that is apparently working satisfactorily at the present time.

Q. In the initial years, your conversions would be principally of anthracite, but in later years, it will be new homes and oil? A. Yes. There will be principally conversions of new homes and anthracite and oil, but the percent of oil conversions compared with coal conversions, we anticipate, will be increased as the years go by.

Q. The solid fuels that would be displaced by natural gas—anthracite and bituminous coal—would be imported from the United States, would they not? A. Yes, sir.

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Q. You testified yesterday in relation to Exhibits 142 and 143 that you did not include any industries using coal,

because you did not consider that those users would be available at this time. You used the phrase, I believe, "at this time."

What did you mean by that? That at some later date in your operations here— A. I think what I had in mind at that particular time was that there is not enough gas available in this entire project to take on that type of customer.

Q. But assuming that you did have enough gas available, if you found that the additional supplies from Panhandle, together with your local production, were such as to give you more gas than you thought you actually were going to have now, would you attempt to take on the coal users?

. . . . . .

A. No.

By Mr. Jerome J. McGrath:

Q. Why? A. A matter of price.

Q. Refer to Schedule L of Exhibit 64, Mr. Palin. What fuel there would natural gas compete with in the industrial market? Which one of those coals there would natural gas have to compete with? A. The lowest grade of bituminous coal shown as industrial range coal.

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Q. That is 38 to 49 approximately? A. Yes, sir, it ranges in different ranges according to the different grades.

Q. You testified yesterday that the lowest rate that interruptible gas probably would be sold for would be about 43 cents as a commodity charge? A. I believe, sir, you made the statement that it wouldn't go below 43 cents. I believe I said "Definitely not." I didn't indicate it would go that low.

Q. But that would be the lowest, that would be the floor at least, under present circumstances, below which you could not go, because of the cost, is that right? A. Take the Hamilton market. If the Hamilton Company is going to pay 43 cents at the city gate, they certainly can not sell the gas at 43 cents. That is what I had in mind when I said definitely that the price would be above 43 cents.

Q. What about at Windsor? The situation would be a little different there, wouldn't it? A. No, sir, it wouldn't be any different. It would be a little closer to the source of supply at Windsor if we were buying prom Panhandle, but if we were buying from Trans-Canada, the situation would be exactly the opposite.

Q. If you are buying from Panhandle, the cost to Union wouldn't be so great that you couldn't sell the gas at practically the commodity charge. Isn't that right?

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A. Yes, but you are up against a different situation in Windsor. These particular industries referred to on Exhibit 143, they happen to be in Hamilton. There is no similar load available at Windsor. The coal replacement load that would be available at Windsor is definitely boiler fuel, and the competitive price there is much below 43 cents.

Q. It would be around 38? A. Lower than that, possibly as low as 33 to 35 cents.

Q. Referring to Exhibit 143, Mr. Palin, and your footnote No. 2, you referred to the fact that no provision here has been made for the market available on conversions of certain industries using bituminous coal for the production of steam for processing.

Do I interpret that footnote correctly to mean that you consider those customers as potential customers? A. No, sir. It is to indicate that we do not intend taking those customers on. It is a kind of load we do not have in mind taking on. There is a demand for gas for that purpose at a price, but we do not intend to take it on.

Q. You make a distinction there as between boiler fuel for power generation and boiler fuel for processing? A. Yes, sir.

Q. I interpret that to mean that you consider the processing steam users as potential customers. I am incorrect in that? Is that right?

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A. I didn't intend to convey that we would endeavor to get that market at all. They would like to have gas for the purpose, but we have no indication of a desire to take it on.

Q. But you testified yesterday that the deterrent of your

taking on such customers was that the volumes of gas required were too large and the price was too high. If you had the volumes of gas available, is it still your testimony that you couldn't dump that gas into those users at competitive prices? A. I suppose if we were up against the proposition of having to take large volumes of gas that couldn't be sold and pay for it at any rate, we would try to salvage all we could out of that gas.

But I think the main point against that is that on both the Trans-Canada contract and the Panhandle contract, we can back off the annual volumes to the extent of 25 percent.

Q. You do have a 75 percent take-or-pay for in both contracts? A. Yes, sir.

Q. So if you should reach a point where you found that your market requirements were not as you anticipated them —that is, assume that your growth wasn't as rapid as you expected it to be and you found that you had to take gas or else pay for it, pursuant to the terms of the contract— you would then attempt to attach some of these potential steam processing

users, is that right? A. I think before that happened there would be a bigger market for it than the customers listed on Exhibits 142 and 143. With the 75 percent take-or-pay-for clause, the fact that the Union Company does have storage which would be used to take up the slack, as it were, if the load did fall off, I don't see there is any possibility of ever attempting to serve this type of customer.

Q. Just one final question, Mr. Palin.

The natural gas that would be imported from the United States from Panhandle would result in the displacement of substantial quantities of bituminous and anthracite coal produced in the United States and imported from the United States into Canada, would it not? A. Yes, sir.

Q. The modus operandi of the company now, what it pro-

poses to do is to use the Panhandle gas to build up the markets for Trans-Canada gas, as soon as that gas eventually reaches the east. A. That would be the end result, if Trans-Canada gas does reach the Union Company's territory.

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By Mr. Flax:

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Q. Have you made any economic studies that would show that it would not be economically feasible to purchase gas up to your maximum contract quantity, store it, and then sell it during your winter for interruptible industrial purposes? A. Yes, sir. We have worked out estimates of what it would cost to store gas per thousand cubic feet. We have come to the conclusion that taking in the entire storage costs on top of the regular cost to import or buy from Trans-Canada and transport would be too great to make it attractive for the company to take on large volumes of interruptible gas on that basis, because it would be a small margin of profit, if any profit. There would be no incentive to do it.

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Q. If, for instance, your cost of competing fuels were to go up, then it might be possible to do it, would it not? A. It might be, on that basis. All the calculations were made on the basis of present prices. Future changes in competitive fuel costs might change the situation either way.

Q. I notice on Schedule 6 your total purchase requirements are less than your minimum contract purchases in the second year.

In that case, since you have a 75 percent take-or-pay,

would it not be reasonable to at least sell your interruptible gas up to your minimum take-or-pay since you are going to have to pay for the gas anyhow? A. If storage is available, and we anticipate it will be, it will be better for us to take up the minimum, put it in storage and sell it at the regular rates, rather than just dumping it at the dumping rates.

The long-term economics would work out better.

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Frederick H. Robinson

recalled as a witness, having been previously duly sworn, was examined and testified further as follows:

Cross-Examination

By Mr. Morley:

Q. Mr. Robinson, in your position as Vice President of Panhandle, I understand that you are in charge of all the sales for Panhandle Eastern.

Is that Correct, sir? A. That is true.

Q. And you have the primary, or at least the ultimate responsibility with respect to the negotiation of all new contracts providing for either new sales or sales of additional volumes of gas? A. Yes, sir.

Q. I think you testified that you were the officer of Panhandle who negotiated the contract with Union Gas of Canada, being Exhibit No. 58, and the amendment thereto, Exhibit No. 59?

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A. I am.

Q. First, in connection with that agreement, Mr. Robinson, how did you arrive at the volumes that are there spelled out which are to be delivered each year.

Did you first decide upon the maximum volume of gas

which is applicable in the sixth and succeeding years, namely the amount of 15,500,000 Mcf? A. They were arrived at by a statement by Union Gas Company as to what their requirements would be under the program which they contemplated, namely the change-over of Hamilton, the City of Hamilton, to natural gas, and certain other communities that they decided they would serve.

When they submitted to us the figures relating to the development of those communities, we then endeavored to work out a plan which would make those deliveries possible.

Q. So that the quantum of gas emanated from the purchaser rather than from Panhandle. They provided you with the volumes of gas which were to supply their estimated requirements? A. That is right.

Q. And at the time that they supplied you with such information, did they submit to you the detailed information supporting the annual volumes of gas desired by them? A. No. The contract which we have with them is in the nature of a take-or-pay for contract, and we assume that their

figures were accurate as to what they would require.

Q. But you made no effort, on the part of Panhandle, nor did any other officer or employee of Panhandle go in and actually check the volumes set forth there to determine whether or not the market supported the volumes which they had included in the data submitted to you? A. We felt that was not necessary.

Presiding Examiner: So the answer is "no"?

The Witness: The answer is "no".

By Mr. Morley:

Q. Now, in connection with your entering into this agreement on behalf of Panhandle, did you make a survey

of any type to determine whether or not those volumes of gas would be required by your customers in the United States? A. We knew, approximately, what volumes would be required by the United States customers.

Q. What I had in mind, for example, you didn't take any of the annual volumes spelled out in the contract, and solicit your customers as to their desires with respect to whether they would want it?

For example, you didn't call East Ohio and say, "We have available 10,500,000 Mcf of gas in a specified year, would you like to buy part of it?" A. We had previously submitted to our full requirements customers, in December 1953, questionnaires which enabled them

to state their requirements over, I think it was a 5-year projection, and we found that their requirements were not unconditional, and that the Canadian program would logically fit into that pattern.

Q. You made specific reference to your requirements customers. A similar questionnaire or inquiry was not directed to your partial requirements customers? A. No.

Q. So no effort whatsoever was made to determine whether or not the partial requirements customers would desire any part of the gas which you proposed to sell to Union Gas of Canada, Limited? A. We had been in negotiation and had numerous discussions with those partial requirements customers with whom we have contracts, and we knew approximately what their requirements would be.

Q. You made no offer for the sale of additional volumes of gas, either firm or interruptible, to Michigan Consolidated Gas Company at either Detroit or Ann Arbor, did you? A. That is correct.

Q. And with respect to East Ohio, you had previously agreed to provide them with larger volumes of gas than you

currently intend to deliver to them, isn't that correct? A Yes.

Q. You originally proposed to deliver to them 100

4930

million a day, in addition to that which you are currently delivering? A. That was the proposal?

Presiding Examiner: 100 Million Mcf, Mr. Morley?

Mr. Morley. No, 100 million cubic feet, Mr. Examiner.

By Mr. Morley:

Q. And you have reduced that as shown by your agreement which is in the record here, the subsequent agreement? A. That is right.

Q. Your principal desire—I say "you" as the top official of Panhandle—with regard to this proposed sale to Canada, are principally and primarily interested in making this sale to Canada because of the fact that the price involved is unregulated by the Federal Power Commission, or any other regulatory agency.

That is correct, is it not? A. Not entirely. The price is of course a factor. There are other factors in this case. We, in our first negotiations with the Union Gas Company, which resulted in the 1944 contract, there was a tacit understanding on the part of the parties—both parties—that we would be a source of supply for them to some extent in the future, and we have felt an obligation to take care of their requirements insofar as we were able to, as our system expanded.

We made an attempt to do so in 1950, we entered into a

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contract at that time with Union, which contemplated a substantial portion of our gas to be sold to them on a firm basis, and that was the subject of a hearing before this

Commission, and we were denied the right to sell them at that time, without prejudice.

The present contract with Union is an outgrowth of that contract of 1950, wherein we sought to adjust to meet the situations that existed by this new form of agreement.

Q. Then your answer is that in addition to the fact that the price is not subject to regulation, that you had some sort of a moral commitment as an outgrowth of your 1950 agreement with them which was not approved by this Commission? A. I think that expresses it.

Q. However, with respect to the rate, Mr. Robinson, you stated that that rate was satisfactory to Panhandle, and that it was arrived at, as I recall your testimony, if I paraphrase it incorrectly, you can correct it—that it took into consideration competitive factors, and you mentioned among one of those factors Trans-Canada, as I recollect it? A. Yes, that was a factor in the negotiations.

Q. So was it the thought of Panhandle that the 35-cent rate was as high as they would be able to go and still make the sale proposed? A. Oh, I don't think that was in any way a limiting factor. It was decided that Trans-Canada's rate would be

about, as I recall, 39 cents, and at that time, Tennessee Gas was proposing to sell Consumers Gas Company, to buy the gas in the field on the Gulf, and I believe they proposed to provide about 20 cents for it there, and there would be an additional transportation charge of about 20 cents.

It looked as though the existing circumstances the 35 cents was a very fair rate, and it was agreeable to us.

Q. The 35 cent rate, of course, takes into consideration the three cent import duty to be imposed by Canada on the Canadian Company as respects the overall economics? A. That is right.

Q. So generally, it did look like that was about as high as you could go in the light of the other potential suppliers for Union? A. Mr. Morley, that was the rate that we agreed to and arrived at.

Q. And you certainly didn't reduce it from some other rate during the negotiations, did you, Mr. Robinson? A. I don't recall having done so. There was considerable discussion.

Q. Now, you are aware, are you not, Mr. Robinson, that Union Gas Company of Canada has entered into an agreement with Trans-Canada Pipelines Limited? A. Yes, we were very much aware of the possibility of Trans-Canada becoming a realty, and we made provisions for this

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in our contract.

Q. Have you any arrangements—does Panhandle have any arrangements with Trans-Canada, Union, or any other interests, looking towards the supplying of gas by Panhandle for markets further to the east than are proposed to be supplied by Union with the volumes of gas here involved? A. No.

Q. So Panhandle has had no negotiations or any discussions looking toward supplying gas for, say, the Montreal or Quebec markets? A. Prior to our negotiations of this contract, we had some discussions relating to that.

Q. However, you have no present prospects or intention of rendering any such service? A. At this time we are not conducting any discussions with anyone looking toward that.

Q. So to the best of your knowledge at this time, it is not intended by Panhandle to render any such service? A. I think that is true.

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Q. In any event, Mr. Robinson—strike that.

Now, you stated on your direct testimony, Mr. Robinson, that in your opinion, certain benefits would flow to the United States customers by these proposed sales by Panhandle to Canada,

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and you recall such testimony, now, do you not? A. Yes.

Q. It is not clear to me, Mr. Robinson, just how those customers would benefit by that sale of Panhandle, that is the United States customers. Would you explain that again for me? A. It is my conception that in a rate-making proceeding, the Commission would assign a certain proportion of Panhandle's cost of service to that sale.

Q. Do you have in mind that in some rate proceeding before the Federal Power Commission, in an allocation, a portion of the cost of service would be assigned to the export deliveries? A. That is my conception. I am not an accountant.

Q. But that is what you had in mind? A. That is what I had in mind.

Q. And that is the only benefit that you can think of? A. It would assist Panhandle's load factor, which in turn, by the same rate-making process, redounds to the benefit of all customers, in my opinion.

Q. And turns on a cost allocation? A. Yes.

Q. Now, the take-or-pay-for provision, which you have already referred to as being contained in your contract with Union, was put in the agreement at the instance of Panhandle, I suppose? A. Yes, and it was agreed to by Union. They saw no

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particular hardship, since primarily the gas which Union will be getting from Panhandle will find its way to domestic and other superior uses.

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Q. However, that provision is wholly and solely for the benefit of Panhandle rather than Union, is it not? A. I think that is true.

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Q. Mr. Robinson, is Panhandle presently selling any gas to customers in the United States under its "I" Schedule as was prescribed by the Commission? A. Yes, under the order of the Commission, we were

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directed to sell "I" Schedule gas to the Bridgeport Brass Company, which is a successor company of Bonn Aluminum and Brass at Adrian, Michigan.

Q. You say you are selling interruptible gas to Bridgeport Brass Company, or to Citizen's Gas Fuel Company? A. I beg your pardon, I misspoke myself. We are selling the gas to Citizen's Gas and Fuel Company of Adrian for resale to the Bridgeport Brass Company.

Q. And that is the single sale which is being made at this time pursuant to that agreement? A. Yes.

Q. And you have offered no gas to Michigan Consolidated Gas Company under that "I" Schedule, have you, Mr. Robinson? A. No.

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Q. Then your policy is primarily one of economics, rather than "America first", I take it? A. Rather than what?

Q. "America first"—United States' customers first? A. I won't say that is a fair statement, Mr. McGrath. As regard Michigan Consolidated, their need, as you express it, is a fluctuating thing. We have experienced over the years that sometimes they need it and sometimes they

don't, depending on what their immediate plans are. We can't be expected to accommodate them whenever they have a shift of plans, and in regard to the Gas Service Company, we feel that they have a major supplier, a pipe line supplier of their own that

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has as it most important market, and terminal market, the Kansas City area.

Were it not for Gas Service, were we able, rather, to abandon service to Gas Service in the Kansas City area, we would have plenty of gas in that lateral line to accommodate Central West Utility and the Missouri Power and Light at Excelsior Springs, so that is all a question for determination by the Commission.

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By Mr. John McGrath:

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Q. Now, Mr. Robinson, as I understand it from your testimony this morning, the evidence as presented in Docket No. G-2433, you will not have sufficient facilities and supply to carry out the proposal as reflected in the contract in Docket No. G-2475, but that you will have to rely on that which you propose in your application as submitted in Docket No. G-8665, and Trunkline's companion docket, No. G-8664? A. I think that is true.

Q. So that if the Commission were to terminate these hearings as consolidated, it is your view that they could not at this time authorize the sale to Canada, only having before them the evidence as presented in Docket No. G-2432 and Docket No. G-2475? A. Well, we regard all of these dockets as a passage. We devised a method of pro-

cedure, and we worked out a means of meeting these situations.

They include the pipe line expansion of our main line, the storage in Waverly Field, and the Trunkline expansion, and we regard all of them as being essential to the accomplishment of the whole.

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By Mr. Flax:

Q. Mr. Robinson, as I understood from your answers to Mr. Morley this morning as to the advantage to the United States of this delivery to Canada, you included a higher load factor for Panhandle, plus the fact that certain of the costs could be assigned to Canadian sales, is that correct? A. Yes, that was the way I regarded it.

Q. Are there any other advantages that you would cite to the customers of Panhandle and the United States?

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A. We consider it a good and profitable contract. We feel that Panhandle will become a stronger company by virtue of making that sale. We believe that as a stronger company we will be able to search for additional gas and capacity to carry it, all of which would redound to the benefit of our state side customers.

Q. In regard to the matter of assigning a proper portion of the cost of the Canadian sales, you would not expect the Commission to assign anymore costs to those sales than as would be properly assignable to them.

In other words, you wouldn't expect the Commission by any means to load costs on the Canadian sales so as to permit a lesser cost of gas in the United States, would you? A. Of course not.

Presiding Examiner: Do you mean by that, Staff Counsel, a lesser cost than was justified?

Mr. Flax: Yes, sir, that is what I mean. In truth, I mean both it would not expect more cost than justified or lesser cost than justified to be put on the Canadian sales that would be comparable to the actual cost.

Presiding Examiner: You so understand the question, Mr. Robinson?

The Witness: That is the way I understood it, yes, sir.

By Mr. Flax:

Q. Now, with regard to this matter of future Panhandle exploration and increases in its capacity, there is no

indication in your answer, is there, Mr. Robinson, that Panhandle may be unwilling to undertake future increases in capacity, or future exploration and development of gas reserves if it is not permitted to export gas to Canada? A. No, that was in no way in the nature of a threat.

Q. Now, in this matter of improving the load factor of Panhandle, is it not a fact that in improving the load factor of a company it is also well to provide for the ability to cut-off quickly the improvement that has been provided in order to provide flexibility for the pipe line system? A. It is helpful, it is not essential. Much—well all deliveries to Union will be interruptible, fully interruptible when peak demands on the system occur.

Q. However, Panhandle will be limited in effect by the amount of continuous interruption by reason of the take-or-pay provisions and the minimum delivery provisions in its contract, is that correct? A. Yes, we have commitments on an annual basis or seasonal basis, but like any pipe line, Panhandle's problem relates to its day of maximum demand. We are relieved of deliveries on that day to Union.

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Q. While I mention the Liberty Lateral, Mr. Robinson, is it your position with regard to the service to Central West on the Liberty Lateral that your argument is in effect not with Central West, but is with Gas Service Company, if you will permit me the vernacular? A. That is correct.

Q. And suppose Gas Service Gas Company could be

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abandoned by reason of the Commission Order on the Liberty Lateral, and then it appeared that the capacity of the Liberty Lateral was not adequate to serve Missouri Power and Light Company and Central West Utility Company, would you then improve the facilities of the Liberty Lateral, Mr. Robinson? A. I don't know.

Q. What would your decision depend on, as to whether you would improve the facilities of the Liberty Lateral under those circumstance? A. It would depend largely on the extent of improvement necessary, the investment, we would have to reappraise the whole situation in the light of such an order of this Commission and take another look at it.

We believe, however, that there would be sufficient gas available at those market points to meet their requirements, and their growth for several years.

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Q. Mr. Robinson, when you are given the word that gas is available to sell to various customers of Panhandle, do you call those customers and inform them that certain volumes are available for those specific customers? A. Well, it doesn't occur quite like that. What we usually do, if we have expansion plans, we acquaint our

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contract customers with those plans, and as in the instance of the agreements resulting in this docket, we ask the customers to let us know how much they would be willing to contract for under our tariff for the first and second year of operation.

They had previously indicated through a questionnaire what the 5-year volume would be by years, so we knew approximately what they would take.

Then we enter into service agreements with them in accordance with their wishes, as a rule.

In this instance that is exactly what we did.

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Mr. Miller: Mr. Examiner, before we proceed with cross-examination of Central West witnesses, which is what I understand is scheduled for today, I have a brief statement which I believe should be made for the record in connection with the Waverly Storage Project witnesses.

Presiding Examiner: All right.

Mr. Miller: I believe we advised the Examiner and the parties that have been active to the proceeding late last week, informally, at least, that the storage witnesses would not be available for cross-examination tomorrow morning.

Presiding Examiner: That is true.

Mr. Miller: I think I should at this time elaborate on the record, some of the facts and circumstances in connection with that situation.

During the course of the testing which has been going on during the past few weeks, some rather serious operating difficulties in connection with the storage field have been encountered. Just how serious they are, and whether or not they will be insurmountable, has not yet been determined.

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It will probably take three more months of testing, at least that is the advice we get from the experts who are in

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charge of the testing work.

Under those circumstances, it is reasonably apparent that the Waverly Storage Project will probably not be available for Panhandle and its customers during the winter of '55-56, as originally planned.

Now, Panhandle is now in the process of formulating substitute plans for the winter '55-56 and just exactly what forms those plans will take or just what can be done to increase our capacity as much as possible during the coming winter '55-56, have not yet been definitely determined and ascertained.

However, as soon then as those plans are definitely formulated, and we are now in the process of active consideration of the matter, they will be made known to the Commission and to the parties in the form of such amended applications and appropriate motions as may be appropriate under the circumstances, and will be filed as promptly as possible.

Under these circumstances, it is Panhandle's request and motion which I desire to make effective after the conclusion of the Central West presentation, but I might as well make it now, that this hearing be recessed pending the formulation and filing of Panhandle's amended plans, and subject to the further order of the Commission.

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William L. Patterson

By Mr. Littman:

Q. But, you gave this computation which I referred to earlier, to show how much the gas would be per Mcf to take care of the deficiency on the Liberty Lateral of 15,206

Mcf, isn't that right? A. Yes, and that was a deficiency as pressured by the estimated demands in 1954-55. The other figure was, of course, the deficiency as measured by the additional capacity—not deficiency, but the cost per Mcf of additional capacity.

Q. And you can't say, since you made no market study, when that total capacity would be needed, can you?

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A. No, sir, I am just familiar with the rapidly growing community up there.

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Q. Is it a fact that in each instance where you named the increase to be made available by each of these laterals which you named, that customers have executed service agreements with Panhandle to buy that gas? A. That is something I don't know.

Q. You do know that that is not the case in regard to the demands as shown or to be supplied per your Exhibit No. 128? A. I showed no demands. I showed capacity.

Q. You don't deal anywhere in this Exhibit with demands? A. No, I have not.

Q. We have already developed the fact in this cross-

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examination that assuming a continuation of deliveries by Cities Service Gas Company of exchange gas, the deficiency on the Liberty Lateral would be reduced to 6,042 Mcf. as compared with your 15,206 Mcf, isn't that right? A. I will accept those figures, and again that would be deficiency based on this year's requirements, with no recognition of any other needs.

Q. Now, under those circumstances, then, the unit cost

would be $103 per Mcf increase in capacity, isn't that right? A. I haven't made any computation on that.

Q. It sounds about right to you, though—all you have to do is divide the 6,042 Mcf into the $619,000, is that right? A. Yes, that sounds right.

Q. And of course that $103 per Mcf exceeds the cost of any of the other laterals that you named, does it not? A. Yes, it does.

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Q. Now, Mr. Patterson, just one other matter here. Harking back for a moment to these studies that you made showing unit cost of increasing capacity of the Liberty Lateral per your proposal in Exhibit No. 128 as compared with the other laterals being constructed by Panhandle, have you made any computations based on the increase in the annual volumes through those laterals? A. No, none.

Q. Of course revenues from any new construction, or old construction for that matter, are a function of annual sales as well as just sales on the one peak-day, of course? A. That is right, if we are talking about market and revenues, I have made no study. Again I can only say that I have a general knowledge of the area within this service, and it certainly appears that a market will develop.

Q. Now, the annual revenues, of course, get us immediately into the question of load factor? A. That is right.

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Q. Of course the higher the load factor, the higher the annual revenues, doesn't that follow? A. That is right.

Q. And, in making an economic study, it is important, is it not, to go into annual revenues? A. Yes, that is right.

Q. And also operating expenses, taxes, and all the things that go into making up a thorough economic study.

You did not go into those elements? A. No, I did not.

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Q. Your answers were so confined? A. The feasibility, where I answered that directly, certainly I had in mind on an engineering basis, because I think, again, a study of the requirements, both present and future, and the condition of the old line as well as some of the other things might have a very distinct bearing on what size line or what improvements should be put in.

Q. You were speaking from a standpoint of engineering feasibility rather than economic feasibility? A. Yes, I was.

Q. As you stated earlier, you did not make any complete economic feasibility study of the installation of these lines? A. That is correct.

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Walter Vaughn

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Q. In other words, Panhandle furnished your company in

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1951, 450 percent of that gas that it furnished to your company in 1943—about four and a half times as much? A. That is true.

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Q. And you also testified that your company ran out of gas on that cold morning, do you remember that? A. That is right.

Q. Was that the morning of February 1, or the morning of February 2 that you ran out of gas? A. That, I don't know, personally.

Q. It was on that day? A. The exhibit shows it was February 1 that was the peak day, and that was the day we ran out.

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Q. I note you say there, in the bar of your chart for February 1, 1951, that you say, "Many customers without gas?" A. That is right.

Q. Mr. Vaughn, I believe you stated you have been with Central West Utility Company as an officer for many years. How far back was that, back to 1936, as I recall? A. 1939, with an interim when I was away from Kansas City for two years.

Q. Now, Mr. Vaughn, you were familiar with the fact that

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back at about the time you say your customers ran out of gas in 1951, the Federal Power Commission was conducting hearings, sometimes referred to as allocation hearings, in which estimates were taken of the requirements and demands of the various companies along the Panhandle system, and the Commission would each winter, issue so-called allocation orders, allocating its capacity among customers—do you remember that situation, generally? A. Yes, generally.

Q. I show you Exhibit 119, which was presented in Docket No. G-1116, before the Federal Power Commission, which consists of a letter on the stationary of Central West Utility Company, dated August 3, 1950, under the signature of Livin H. Bell, President. Actually, it bears the caption, "Re-Docket G-1240 et al, Re: Panhandle Eastern Pipeline Company," to which is attached as a part of this exhibit an item called Tables B and C, entitle, "Peak Day requirements, Mcf at 14.73 PSI Absolute;" which purports to be the response by your company to a questionnaire sent out by the Federal Power Commission. Do you recall that response? A. I recall that was made up by Mr. Bell at that time.

Q. Mr. Bell is no longer President of your company? A. No, sir.

Q. I note that under the heading, "Estimated Peak Day, Winter 1950-'51, Converted to zero degrees fahrenheit," your

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response to the Commission's questionnaire showed a total requirement of 6,324 Mcf. Do you see that on that answer? A. Yes, sir.

Q. And are you familiar with the fact that as a result of that proceeding the Commission issued an order on December 18, 1950, establishing several rules and regulations for Panhandle Eastern Pipeline Company for the winter of 1950 '51, which appears in volume 9 of the Federal Power Commission Reports, the pertinent part on page 1344, showing that the Federal Power Commission allocated to your company for that winter a total of 6,128 Mcf.

Do you see that? A. I see it.

Q. In other words, your company in that proceeding requested the Federal Power Commission to allow you 6324 Mcf at zero degrees for the winter of 1950-'51, that was your estimated requirement, and the Commission actually allowed you 6128 Mcf in its allocation order, and you proceeded—that is, your company proceeded to take, on the winter peak day of that winter, namely on February 1, 1951, the amount of 7741 Mcf as shown by Exhibit 129, is that right? A. That is right.

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Q. Well the fact is that your company has not turned down any applicants for space heating who were within economic reach of your lines, is that right? A. I believe that is true, yes, sir.

Q. Now, you testified also that your company did not experience any interruptions in service until 1950, or 1951.

Isn't 1951 actually the first time that you claim to have experienced any interruptions, rather than 1950? A. According to Exhibit 129, that is the first date on which we show that customers were without gas.

We were in previous periods frequently suffering from low pressures at the outer edge east of our distribution system due to a lowering of Panhandle's pressures at the town boarder station at Liberty.

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Q. What pressures are called for by the contract? A. The original contract, I believe, was a pressure of 50 pounds.

Q. Panhandle never got below 50 pounds, did it, during any of that time? A. I think Panhandle at one point was down to 46 pounds.

Q. In what year? A. Or 47 pounds. I can't remember what year that was.

Q. Was that prior to 1951? A. No, I think not. I think it was after 1951.

Q. In other words, we are talking now about prior to 1951 on that one day which we have already discussed, prior to that time you began to experience some lowering of pressures on the edges of your distribution system due to the fact that you were receiving something above 50 pounds pressure from Panhandle, according to the contract, but not as high as you had been receiving it theretofor? A. That is right.

Q. That could have been remedied, couldn't it, by installing some additional facilities in your distribution system, isn't that right? A. I don't know. I think it could have been remedied by Panhandle's increasing or keeping their pressures up.

Q. You mean by Panhandle giving you higher pressures than those called for by your contract, is that what you mean?

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A. Yes.

Q. Well, that is nice if you can get it, but— A. That was the customary procedure of Panhandle. The pressure was a minimum in the contract.

Q. That procedure whereby distribution companies like to have the pipelines give them more pressures than called for by the contract so as to enable them to avoid building facilities in their distribution system, that practice is commonly called, and I use the expression of Mr. Buddrus, former president of Panhandle Eastern Pipeline Company, "ham-and-egging" the system, isn't it? Isn't that a common expression in the industry? A. It is not familiar to me, but perhaps it is.

Q. You just have those for breakfast.

Now, following that day of February 1, 1951 when you say you experienced some difficulty in shortages of gas, did your company impose any restrictions on the attachment of new space heating customers within the economic reach of your lines? A. No, we did not.

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Q. And isn't it a fact that throughout this period, namely 1951 and '52, or thereabouts, that elsewhere throughout the Panhandle system, in the states of Illinois, Indiana, Ohio, and Michigan, Panhandle's customers had restrictions in effect against the attachment of new space heating loads? A. I have no immediate knowledge of that fact.

Q. Now, you testified, also that along about in 1945 and 1946, your company sought additional gas for space heating and industries from Panhandle, and was turned down. Do you remember that? A. Yes, sir.

Q. Now, 1945 and 1946 would be immediately after the conclusion of World War II, wouldn't it?

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A. Yes.

Q. Now, you are familiar with the fact, aren't you, Mr. Vaughn, that at that time, there was a very stringent shortage of large diameter pipe, and that virtually every pipeline system in the country was unable to expand its system and take care of needs of its customers at that time—you are aware of that fact, aren't you? A. Yes.

Q. You are also aware of the fact, are you not, that at that time, there were in effect, War Production Board limitation orders restricting the construction of new pipeline facilities without their permission and also limitation orders against the attachment of space heating and industrial demands without their permission?

You are aware of that, are you not? A. I am. I think we made no great issue with Panhandle during the time immediately after World War II when there were so many restrictions. We were restricted, ourselves, in the amount of pipe that we could get to make connections. We knew that the "G I's" were coming back and were building houses, and that the distributors all along Panhandle's lines were pretty much in the same situation.

It wasn't until we began to notice that Central West and the Liberty Lateral were being set apart from the rest of the distributors of Panhandle and treated in a different way that it became obvious to us that we would have to come in and protest

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and make our situation known, and see whether anything could be gained from it.

Now, that appeared right after these restrictions were lifted, and at a time when our territory was growing so rapidly that we had to move along and find out what we could do, and we had beside us a very rapidly growing large distributor who was anxious to come in and serve

our property if we couldn't serve it. That was the time when we came in and made re-estimates and began to make advance planning in order to visualize where our system was going to end, how big it was going to be, and how much gas we were ultimately going to need from Panhandle.

We are in no way timid about the estimate that we make of 12,000 Mcf for the future. I have in the past week driven over the territory myself, and the amount of building this spring is astounding. Houses are going up everyplace, roads are being built, churches, supermarkets are going in all over our area, and we see no question but what our estimated growth in this territory is not in the least unreasonable.

Q. Mr. Vaughn, we have gotten a little far afield from 1945. What you have just said prompts me to ask you what relevance your testimony as to any turn down by Panhandle in 1945 of your request for gas for new space heating customers and industries has to do with this particular proceeding? What were you attempting to convey to this Commission? A. You were attempting to convey that we didn't know what

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we were doing back in 1945, and that we were not making proper estimates of what we were going to use, and I am telling you we did try to cooperate in those years immediately after the second World War and our estimates were based on what we thought was a conservative, realistic operation in periods of restricted pipe and labor, and so forth.

Q. Mr. Vaughn, when you gave this testimony that I referred to at Transcript 2833, you were testifying on direct, before I had undertaken to prove anything in this proceeding, and there you testified without any provoca-

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tion as far as I can see, that Panhandle had turned you down in 1945 and 1946 when you wanted more gas.

Now, then, we have developed in this cross-examination that everybody was being turned down because there wasn't sufficient steel pipe available to make necessary main line I am not talking about laterals now, main line or any other kind of expansions.

My question to you now is what was the relevance of that testimony, what were you trying to establish at that time, what point were you trying to make?

Presiding Examiner: Mr. Littman, the witness was testifying in response to a question of his Counsel. It would seem to me it is a matter for argument, or at least the question should be directed to his Counsel as to what was the relevance of it.

Mr. Littman: All right, I will pass it, Mr. Examiner.

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I think we have sufficient testimony about 1945 and '46 to show that everybody was in the same boat, and certainly back as far as that year; certainly no one could claim any possible discrimination.

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Mr. Shannon: That is correct sir, I could, but I would not have a completed record. As I see it, what Mr. Miller is seeing to do is leave this record open-ended. Now, the application is just a shell, we have nothing here, and in this connection I recall to Your Honor's attention, the fact that I predicted at the outset of this case, that we were going to get

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into just exactly the snarl we are in now. I made a motion then to compel Panhandle to amend their application in accordance with their present intentions, and you sub-

mitted that motion to the Commission, and it was denied.

I submit that what we have here is proof of the pudding, that you can't conduct a proceeding unless you have got proper pleadings, and when your applicant is no longer advocating or proposing his application, it has got to be amended, otherwise the whole thing starts off on the wrong foot and you have continuous confusion.

I don't want to see this record kept open-ended, and have the impression left here that Panhandle has some kind of expansion program. There isn't any expansion program here, they have abandoned it. The expansion is 100 million cubic feet and it has been distributed.

There is no gas here for anybody. If that is the fact, let's face it.

I would like for you, Mr. Examiner, to do this, to deny the motion for an indefinite recess, close this record, and then it will be ripe for motions to dismiss. As long as you leave the record open, Panhandle will resist any motion to dismiss on the grounds that they are going to get around later on to some other variation of the program, and will keep this thing dangling here for another two or three years.

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Walter Vaughn

Q. In your direct testimony, following the testimony to which I adverted this morning regarding the alleged refusal on the part of Panhandle to give your company additional gas in 1945 and 1946, you then testified, starting at about page 2834 of the transcript, regarding a refusal in 1948 on the part of Panhandle to sell you gas for resale to Great Lakes Pipe Line Company for use in a compressor station.

Do you recall that? A. That is right, yes, sir.

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Q. I believe the quantity of gas which you named for use was 180 Mcf per day, is that right? A. Yes, sir.

Q. Was that a firm sale or an interruptible sale? A. I believe that that was—I can't tell you that, sir, I just don't know that fact. Perhaps I could find it in my papers, but I don't know at the moment.

Q. Without going into all the details again, isn't it true that in 1948 there was still a shortage of steel pipe, and there were limitation orders in effect from WPB, weren't there? A. I believe that is true, yes.

Q. Now, the next one you mentioned, and I think we have just one or two more here, was the Wabash Railroad Company proposed sale, that company being a prospective industrial customer in 1950.

Do you recall whether that quantity of gas was firm or interruptible? A. That was interruptible.

Q. That was about the time of the Korean War, wasn't it? A. Yes.

Q. And in the same year, you referred to a request of Panhandle for gas from R. E. A. Power Plant, known as the Northwest Electric Power Cooperative. It was the same situation there? A. Interruptible.

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Q. And that request was made during a period of shortage of steel pipe due to the Korean situation? A. Oh, I am not sure of that. I know that in the situation with respect to the Ford Plant, or, as you worded it, the Wabash situation, the Gas Service Company was ready and willing to provide the line and they did take over the customer and provide the pipe for that purpose, and we would have done the same thing, I am quite sure, had we had the gas.

Q. Of course the Gas Service Company has been serving some pretty thoroughly saturated markets for many

years, have they not? A. Well if you mean downtown Kansas City, yes.

Q. In other words—the markets of the Cities Service Gas Company have been served with natural gas for many, many years, and their markets were fairly well saturated, as compared with markets that were not undertaking to be supplies with natural gas at all until the 1930's, where expansion, where room for expansion was much greater, isn't that true? A. I don't know the details of the Gas Service Company, but I do know that they serve metropolitan Kansas City, and areas not served by us, and that the growth in certain areas of Kansas City that they do serve, is very great and has some of the characteristics of the growth in Clay County, but not any saturation, if you are speaking about the growth of the area and the requirements for more gas.

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Q. I was thinking more in terms of the pipe line supplier, that is Cities Service Gas Company, as distinguished from the Gas Service Company.

The fact is that the pipe line capacity—now I am speaking of the main pipe line capacity of Panhandle Eastern Pipe Line was being allocated in 1950, pursuant to annual allocation orders, wasn't it? Isn't that right? A. Yes.

Q. And not only your company, but all the other companies on the system had to come to the Federal Power Commission to obtain allocations of supplies for each winter.

You recall that, don't you? A. Yes.

Q. And that was right during this period that we are talking about, 1950, isn't that true? A. Yes.

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Q. Well, now, you say you would be willing to sign up for 12,000 Mcf of winter contract demand. When, in your

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judgment, would you be able to use that much, bearing in mind that you only used some 6000 Mcf last winter? A. We expect within three years our system will more than double. We are looking for 5600 new houses to be built within a reasonable length of time in our area, plans already made by builders. We have 3200 customers now. If those houses are built, that is more than twice the size of our present system. It does not include the commercial customers that we would get by virtue of new marketing areas. It does not include the school load that we would get, and that sort of thing.

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Q. Then, is it the position of CentralWest Utility Company that Panhandle should prevail in its abandonment proceedings involving Gas Service Company? A. It is my opinion that Mr. Robinson is wrong in stating that if the abandonment proceedings prevail, that there will be enough gas to take care of Central West Utility and the Missouri Power and Light Company.

Mr. Patterson testified that the amount available at Liberty would be something over 9000 Mcf, and from historical data, that might appear to be enough, but I am looking at houses, and houses to be built, and I know that our area is growing so rapidly that that won't take care of our situation if it continues the way it is going.

I see no reason to stop with a facilities of that limi-

tation when we have to serve a certificated area that is developing as rapidly as the one that we are in.

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Q. Has Cities Service ever approached you, or have you ever approached Cities Service for a supply of natural gas? A. Oh, yes, several times, and I testified, I believe, before that they have always turned us down.

Q. So that as far as you are concerned, Panhandle Eastern is your major supplier? A. It is.

Q. Is your sole supplier? A. Sole supplier of Clay County area.

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Q. In Mr. Littman's cross-examination, he asked you whether Central West, within the period from approximately 1950 on to the present time, had been unable to serve any customer requesting service within its certificated territory.

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Now, has or has not Central West been able to serve customers when it was requested that it extend service to them in that period of time? A. No, we have testified that we have been unable to serve customers because of the lack of gas, and that has caused the inroads that have been made into our area because of our inability to serve gas and the fact that the gas—the Gas Service Company has been in an adjoining area able and willing to serve. It has made necessary our disposal to them of 3000 customers in 1951. It was because of our inability to serve the area in Gladstone, which has made it necessary to cut back our area, and we have lost the Ford Plant—the whole cause of our failure to expand as we should has been our lack of an adequate supply of gas from Panhandle.

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Q. And by inroads being made, you refer specifically to what? A. To Kansas City North, and to the Gladstone area that we lost in 1950, and that was given to the Gas Service Company by the Missouri Public Service Commission in 1954, the loss of the Ford Plant as a customer, and our inability to serve industrial customers that we have testified to, and also our inability to expand around the periphery of our system, and the necessity of constantly pulling back and reserving our gas for the purpose of serving the growing area closest to our source of supply at Liberty.

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When there was any question of taking on customers, we were constantly mindful of the fact that the customers furnished from the town border stations would be the ones that would have their service interrupted first, and consequently in a choice, we made the choice for the customers closest to our source of supply.

Q. Now prior to the section of the portion of your testimony included in Kansas City North, your peak-day take was 7,741 Mcf, as I recall the testimony shows.

I will ask you if following the cession of the Kansas City North Territory Central West anticipated that quantity of gas would be available from Panhandle to take care of expansion in what was left of its certificated territory? A. Yes, of course, we disposed of 3000 customers at that time in the belief, in the full belief that we would have full amounts of gas that had previously been served to our territory to take care of the reduced territory that we were now going to operate and would allow for an expansion of the remaining territory by at least the same number of customers as we had ceded to the Gas Service Company.

Q. Did that prove to be the case? A. Not at all.

Q. In what respect? A. At the same time that we were

taking 7,741,000 cubic feet on February 1, 1951, the Gas Service Company took

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10,220,000 feet; whereas, on January 2, 1954, we took 5,540,000 feet, and curtailed some of our customers on that day, and at the same time Gas Service took 15,180,000 feet, while actually our supply went down, the Gas Service Company's supply from the Liberty Lateral at the same time went up.

We have not only lost Kansas City North, but we have lost our supply of gas.

Q. One more question; in your answer to Mr. Littman and Mr. Flax's questions about the amount Central West would be willing to contract for, and which you stated it would contract for 12,000 Mcf, is or is not that answer of yours conditioned upon Panhandle's having the ability to deliver that gas to Central West? A. Yes.

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Mr. Miller: Yes, Mr. Examiner, a very brief opening statement. I don't believe there is any necessity for a lengthy opening statement at this resumed hearing. This

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statement will be on behalf of both Trunkline and Panhandle.

Panhandle's general position, of course, was set forth in its petition for this resumed hearing, and as noted by the Examiner, the Commission has set down for consolidated hearing, along with certain other matters, Panhandle's Docket 2433 application, as well as the Trunkline-Panhandle interdependent applications in Docket No.s G-8664 and G-8665.

For the information of the Examiner and the parties, a brief resume of what we propose to show and how we propose to proceed might be in order at this time.

First, with respect to Trunkline and in support of its application to increase its peak day capacity by 85,000 Mcf from 290,000 Mcf per day to 375,000 Mcf per day by the addition of eight new compressor stations and about 24 miles of loop line at an aggregate cost of approximately $17,700,000, and on which a temporary authorization was granted on June 30, we expect to put on the necessary witnesses to show in this order; gas supply, engineering and costs, market data, cost of service, and financing.

Now, with respect to Panhandle, as previously indicated in our petition for resumption of this hearing, the Waverly storage project on which there had been some proof, but also on which we have had some operating difficulties—that project will not be pursued or relied upon in this consolidated hearing, and as previously indicated several

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times in the course of prior hearings in Docket 1705, et al, there will be no proof by Panhandle on the originally proposed compression expansion of Panhandle.

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M. M. Farley

By Mr. Miller:

Q. Mr. Farley, were Exhibits 80-A and 27-A prepared by you or under your supervision and direction? A. Yes, they were.

Q. Directing attention first to Exhibit No. 27-A, will you give us a brief explanation of what that exhibit purports to show? A. Exhibit No. 27-A is a tabulation of contract demands for the period commencing December 1, 1955, and is a revision of Schedule 2, pages 6 and 7, of Exhibit No. 27.

The last column and the footnote shows the source of the information shown in this exhibit.

With respect to the general service and small general service customers, it will be noted that the contract demands were obtained from Exhibit No. 27, Schedule No. 2, 1955, letters of agreement, or are obligations presently imposed by the Federal Power Commission.

With respect to the limited service customers, the contract demands shown for East Ohio Gas Company of 120,000 Mcf represents an increase of 35,000 Mcf over the present contract demand. The contract demand for Michigan Consolidated Gas Company of 127,000 Mcf is the obligation presently imposed by the Federal Power Commission.

The contract demand for The Ohio Fuel Gas Company of 70,000 Mcf represents an increase of 20,000 Mcf over the present

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contract demand.

Q. Mr. Farley, with respect to the East Ohio Gas Company and The Ohio Fuel Gas Company, while the contract demand shown in Exhibit 27-A represents an increase over the present contract demand, it represents a decrease over the contract demand previously shown for those customers in Exhibit 27. Is that correct? A. That is correct.

Q. And the decrease, I take it, is pursuant to the letter agreements with those companies as contained in Exhibit No. 190. Is that correct? A. Yes, sir.

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Mr. John A. McGrath: So that, in so far as Exhibit 27-A is different from Exhibit 27, that difference is reflected either in Exhibit 190 or Exhibit 81. Is that correct?

The Witness: That's right, except possibly with respect to Gas Service Company, Louisburg lateral. On Exhibit

No. 27, Schedule 2, we have excluded the requirements of the Louisburg lateral, as I recall; whereas in Exhibit 27-A we have included the requirements of the Louisburg lateral.

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Mr. Wirth: The other question I had, Mr. Farley; in Exhibit 185, which Mr. Hanna sponsored, he said you would be able to give us the information on the breakdown of the amounts shown for transmittal into the Detroit area which total 236 MMcfd. Could you do that, please?

The Witness: Yes, sir, Ann Arbor, 125,000 Mcf; Detroit—

Mr. Wirth: I beg your pardon. How much?

The Witness: Oh, this is reversed. Detroit, 125,000 Mcf. Ann Arbor, 2000 Mcf. Union Gas Company of Canada, Ltd., 85,000 Mcf. Undistributed, 21,838 Mcf.

Mr. Wirth: Shouldn't there be something in there for Michigan Gas Utilities?

The Witness: There is a figure included in the points of delivery between Maumee and Freedom for Michigan Gas Utilities at Coldwater, 1446.

Mr. Wirth: I am referring to the Monroe area for Michigan Gas Utilities.

The Witness: I missed that, Mr. Wirth. 2,308 Mcf.

Mr. Wirth: I couldn't understand that?

The Witness: 2,308 Mcf.

Mr. Wirth: And those are presumed to total the 236 MMcf?

The Witness: 236,146 Mcf.

Mr. Wirth: In Exhibit 187, in that same section of the

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line, you have 134 MMcf. That would be 127,000 for Michigan Consolidated?

The Witness: Yes, sir, and 7,100 Mcf for Michigan Gas Utilities Company, Monroe.

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Mr. Generelly: I believe the position of Michigan Consolidated—as was brought out in previous statements and in brief argument here—is possibly a little anomalous within a reading of this order in that it includes provision for appropriate presentation by intervening parties at this time, including those of Panhandle's existing customers, who desire to present evidence in support of requests for increased natural gas deliveries.

As it has been brought out here, Panhandle has at least for the coming winter abandoned its proposal to again abandon its deliveries to Michigan Consolidated—an existing customer. The intimation is rather strong that that isn't an abandonment of Docket No. G-1725 for all times.

Presiding Examiner: What Docket number?

Mr. Generelly: G-1725, which is not part of these proceedings, Mr. Examiner. But as a result of the Examiner's

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decision of June 7, 1955 I believe, in Docket Nos. G-1116, G-1725, et al, Panhandle's request in the remanded proceedings involving Docket No. G-1725 to cut back Michigan Consolidated was denied.

Yesterday the Commission denied a request for reconsideration of its order affirming the Examiner's decision. Panhandle in the course of its presentation in Docket No. G-8665 stated—and it is a matter of record—that there is no abandonment proposed in its existing deliveries to Michigan Consolidated during the coming winter.

While we do not in this proceeding seek an increased supply of gas, certainly Michigan Consolidated has not been offered any gas by Panhandle. We have pending

an application—G-1379—for increased deliveries under Panhandle's interruptible rate schedule.

Because of this overall picture, we are in a certain sense an intervenor seeking an increased supply. In any event, we are an intervenor seeking to protect our existing supply.

I would like the record to show that we wish to reserve our position in all regards and respects to come back, following the recess, to make whatever showing we may find advisable in the interests of protecting our supply and conditioning any allocation of some of Panhandle's proposed deliveries on the preservation of that supply and the possible increase in it.

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But the exact nature, again, Mr. Examiner, of what our presentation will be I am unable to say until after cross-examination and we have had an opportunity to analyze Panhandle's exhibits.

Therefore our case may be in part rebuttal; it may be in part in support of Panhandle's application. But there are certain elements in which it will partake of both.

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Q. You mentioned the Waverly project yesterday. Is that permanently out of the picture now? A. I can't speak for Panhandle on that subject.

Mr. Miller: I can answer that question, Mr. Morley. It is not permanently out of the picture. It is still under study, but it is not in the picture so far as this pending proceeding is concerned.

Mr. Morley: So far as 2433 at this juncture, we can forget it?

Mr. Miller: That is right, Mr. Morley.

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L. E. Hanna

was recalled as a witness, having been previously sworn, was examined and testified further as follows:

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Cross-Examination

By Mr. Flax:

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Q. To which customers would you deliver gas on warm winter days who would benefit by the installation of this additional horsepower?

In other words what customers would take increased volumes of gas over those presently being delivered on your warm winter days? A. Probably the storage companies on the east end of our line, companies with storage facilities.

Q. Would there also be Canada? A. I don't think so.

Q. Are you aware that your contract provides for a certain guaranteed minimum delivery to Canada during the winter? A. I am slightly aware of it, yes, sir.

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Q. And you would expect Panhandle to deliver that gas during the winter on the warm winter days to Canada, would you not? A. Yes, sir.

Q. As opposed to the peak days? A. That's right, that is correct.

Q. At least portions of your gas would go to Canada on those warm winter days, would they not? A. I presume they would, yes, sir.

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Q. This maximum day summer capacity as shown on Exhibit No. 185, would you say that that is the summer capacity that you expect to operate at and the fashion in which you expect to operate on the average summer day? A. No, sir, I don't believe it is.

Q. How would your average summer day be changed from the maximum summer day? A. I think we would reduce our inputs to our Liberal compressor station.

Q. And would you take more gas from Trunkline? A. If there was a market for it.

Q. Then I believe you testified that there was a balancing figure in your deliveries on the extreme eastern end of your system. It that correct? A. Yes, sir.

Q. And whether any of the gas represented by that balancing figure is sold would then depend on the companies having storage or Canada to take that gas. Is that correct? A. Yes, sir.

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M. M. Farley

was recalled as a witness, having been previously sworn, was examined and testified further as follows:

Presiding Examiner: Staff counsel?

Cross-Examination

By Mr. Flax:

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Q. Referring to Exhibit 190, particularly the contract with East Ohio Gas Company, there is reference there to increasing East Ohio's contract demand to 185,000 Mcf per day commencing November 1, 1956. That is part of the

old contract between East Ohio and Panhandle, is it not? A. Yes, sir.

Q. According to this new contract, Panhandle would reduce that 185,000 contract demand to 120,000 Mcf per day on a firm basis under the LS schedule, and substitute for the other volumes which it previously had contracted to deliver, six million Mcf a year under the storage rate schedule, is that correct? A. Yes, sir.

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Q. Will you give us some enlightenment as to the proposed distribution of the balancing figure volumes at the east end of the system. A. I did not work out any figures on that. However, it would be necessary that we have some flexibility on the east end of the system in order to take care of greater volumes of gas over the week-ends when the industrial loads were cut back.

For example, with respect to deliveries to Michigan Gas Storage Company, when industrial loads were cut back over the week-ends, it permits us to deliver more gas over the week-end than during week days. So we do need some flexibility on the east end of the system.

Q. Would your week-day deliveries to your various customers on the east end of your system be ample so as to permit delivery of your annual volumes if multiplied out by the number of days during the year? A. We do not necessarily deliver gas in constant volumes under storage rate schedules particularly. We vary those deliveries up and down. During the week we will be delivering less, and on the week-ends we will be delivering more. We do average out over the annual period.

Q. On the week-ends there would be a cut-back of industrial service in the east end of the system, would there not?

A. The east end and the west end.

Q. By reason of that cut-back in industrial service, would you not have sufficient flexibility to permit the deliveries to your various customers? A. That is the reason we need the flexibility on the east end—to deliver greater volumes of gas on the week-ends when the industrial loads—west and east—are cut back. That is also true with respect to deliveries to Canada, where we might deliver more gas over week-ends.

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Q. Mr. Farley, the deliveries into storage that you referred to as being week-end deliveries, these deliveries being on the east end of the systen : Considering the necessity of delivering gas all the way from the storage fields up to the east end of the system, are you able to get enough gas up there on the east end of the system to provide for the week-end deliveries?

Presiding Examiner: Just a moment before you answer. Mr. Flax did you mean storage fields in your question?

Mr. Flax: Yes, sir. I think that is why he said they

needed the flexibility on the east end of the system—so they could deliver to the storage fields.

I understand I said from the storage fields instead of to the storage fields.

Presiding Examiner: Yes, you did; from the storage fields. That is what was confusing to me.

Mr. Flax: Could the question be read?

Presiding Examiner: Read the question.

(Question read.)

By Mr. Flax:

Q. It should be supply fields rather than storage fields. Do you understand the question, Mr. Farley? A. Yes,

that is the reason we need the additional capacity on the east end, in order to get the gas up there.

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Q. What is the volume of the McLouth contract? A. The McLouth Steel Corporation Gibraltar plant provides for interruptible total of 3,500 Mcf the first year; and 12,000 Mcf after the first year. The McLouth Steel Corporation Trenton plant provides for 3,500 Mcf in the first year; and 12,000 Mcf per day after the first year—all on an interruptible basis.

Q. What would be the average day deliveries under each of those contracts, Mr. Farley? A. I have not made my computation of that.

Q. How many days delivery would be estimated under that? A. I assume for 365 days in the year, excluding those days when curtailments are made.

Q. How many days did you contemplate it would be necessary to curtail? A. I don't know. Maybe one day out of the winter; maybe three or four days; or it may be seven or eight days. I can't answer that.

Q. But you wouldn't expect it to be more than, say, fifteen days? A. I wouldn't think so.

Q. So if we wanted to get an average day volume, we could divide the volumes you have given by 350, which you say is a good fiure? A. And multiply the volumes by 350. Those were

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daily volumes that I gave you.

Q. Those were daily volumes? A. Yes, sir.

Q. Then those were average daily volumes? A. They were the maximum daily contract obligations.

Q. Totaling those contracts after the first year, you

get a figure of 24,000 Mcf per day for the contracts. Is that correct? A. That is the maximum, yes, sir.

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Q. In the light of the fact that you have signed up for 15,200 Mcf, how do you intend to deliver that 15,000 Mcf when the availability which you have provided has only been 14,000 Mcf? A. As indicated by the letter, Exhibit No. 219, addressed to Missouri Public Service Company, we have some plans for serving the second year's requirement from storage facilities which we presently have under development. It is quite possible that those storage facilities would be available for the winter of 1956-1957.

Presiding Examiner: Are you talking about Waverly storage?

The Witness: No, sir. While Waverly is still in the picture, we have plans under way at the present time for another storage field.

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Q. That is right. And it will be possible for the aggregate of the contract demands to exceed Panhandle's capacity, and still Panhandle will be able to meet the peak day demands of all their firm customers, is that correct? A. I think if we sign service agreements, we will be able to deliver the requirements of the customers at any time during the winter period, and also during the summer period.

Q. Mr. Farley, do you make that statement contemplating expansion by Panhandle next year or is that a statement made just on the basis of the facilities for which it seeks authorization at this time? A. As indicated by this letter addressed to Michigan Public Service Company, Exhibit No. 219, we do have plans for developing another

storage field. It is quite possible we will be able to use some gas from that field in the winter of 1956-1957.

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Q. Mr. Farley, you are aware, are you not, that Panhandle, in Docket No. G-9189, has applied for and obtained temporary authorization pending final Commission decision for deliveries of six million cubic feet of natural gas prior to November 1, 1955? You are aware of that, are you not? A. Prior to December 1, 1955?

Q. Yes, sir.

Q. And in addition, Panhandle has applied for similar temporary authorization and has been granted similar temporary authorization to deliver six million Mcf of natural gas to Michigan Consolidated Gas Company prior to December 1, 1955? A. Yes, sir.

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Q. Are those volumes shown at any point in your Exhibit 80-B? A. No, sir. Exhibit 80-B starts with 1956.

Q. In other words, the 9189 authorizations are entirely separate and distinct from the applications and the exhibits in these proceedings, is that correct? A. That's my understanding.

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Q. Mr. Farley, I refer you to Exhibit 135-B wherein you show monthly deliveries and annual deliveries by Panhandle. Now I note that you have a category of firm sales on the main line east of Liberal. Those firm sales include your storage sales, do they not? A. Yes, sir.

Q. Could you show for the record how you would break out your storage sales for each of these years and in so breaking out your storage sales, distinguish between the sales to East Ohio and those to Michigan Gas Storage Com-

pany? A. You say for each of the years 1956 and 1957?

Q. Yes, sir. A. There is in 1956 and 1957, 6 million Mcf to East Ohio Gas Company and 56 million Mcf to Michigan Gas Storage Company.

Q. How much of that 6 million would you deliver in April to East Ohio Gas Company? A. 20,100 Mcf per day.

Q. Could you give us the figures straight through the seven months; April through October? A. The same figure for each of the seven months, April through October.

Q. And that is both in 1956 and 1957? A. That is for 1956. In 1957, April, 19,900 Mcf per day. In each of the months May through October, 22,200 Mcf

per day.

Q. Why do you change your pattern of delivery between 1956 and 1957? A. We just worked it out that way. It would not be necessary to change it. We could use the same figures. But in making our distribution, we used a little different figure in 1957. In 1956, due to leap year, is one reason for it. We spread it out a little lower in 1956 because there is one more day. We delivered the 6 million Mcf.

Q. Your deliveries will be during the summer period, will they not? A. We assume certain deliveries in the other months. The same as in Michigan Gas Storage; our service agreement with Michigan Gas Storage is for 42,605,000 Mcf on an annual basis. Although the service agreement only showed deliveries April through October, it is necessary to deliver either additional gas in those seven months or certain deliveries during the months of November through March in order to equal the 42,605,000 Mcf.

Q. Doesn't your tariff provide that you must deliver 90 percent of your storage gas during those seven months?

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A. I don't see in the tariff here the 90 percent you have reference to.

By Mr. Flax:

Q. Doesn't it provide that you cannot put over more than 10 percent of your annual contract volumes during those months— A. During the months we may at our election deliver up to 10 percent less than the monthly volumes set forth in the service agreement.

Q. And doesn't your service agreement provide only for deliveries during those seven months? A. It does, where the service agreements sets forth deliveries April through October. But in order to deliver to Michigan Gas Storage Company 42,605,000 Mcf, it is necessary for us to deliver 30,000 Mcf per day in each of the months November through March in order to equal the total annual contracted volume of 42,605,000 Mcf.

Although the service agreement does not show any volumes for the five months November through March, it is necessary

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to make those deliveries of 30,000 Mcf a day, or make additional deliveries in the other seven months.

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Q. On the basis of the volumes which you have named as being your proposed deliveries to East Ohio, what percentage of your annual volume to East Ohio would be delivered during the summer months? A. I have not made the computation on percentage, but it would be around between 4 million and 4.5 million Mcf of the 6 million Mcf would be delivered in the months of April through October.

Q. What is your monthly schedule of deliveries to Michi-

gan Gas Storage Company? A. In 1956, April through October, 182,600 Mcf per day.

Q. How about for 1957? A. We show in April, 185,400 Mcf per day; and in each of the months May through October, 207,400 Mcf per day.

Q. What volume would be delivered on the Michigan Gas Storage Company storage contracts?

Before I ask that: That is only the storage deliveries to Michigan Gas Storage Company that you are including? A. Yes, sir.

Q. What volume would that aggregate during the seven summer months for Michigan Gas Storage Company? A I just gave you the volume under the storage service agreement. Now, do you have reference to the G-1 rate schedule?

Mr. Flax: May we have the answer that gives the volumes,

please?

Presiding Examiner: Read it, please.

(Answer read.)

By Mr. Flax:

Q. My next question went to the summer aggregate in each of those years to Michigan Gas Storage under the storage agreement. A. I have made that computation. It would be a matter of multiplying the daily volumes by the number of days in each month.

Q. Those volumes you have given us are averages and may be multiplied by the total number of days during that period to get that annual volume. Is that correct? A. By the total number of days in each month, yes, sir. That will not give you the annual volume. That will be a portion of the annual volume because we have assumed certain deliveries in the other months of the year, November through March.

Q. What was your assumed deliveries in each of the other months of the year for East Ohio and for Michigan Gas Storage, Mr. Farley? A. In 1956, East Ohio, January, 9,000 Mcf; February, 11,000 Mcf; March, 19,000 Mcf per day. November, 13,900 Mcf per day; December, 8,000 Mcf per day. Michigan Gas Storage, under the storage service rate schedule, January, 81,600 Mcf

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per day; February, 97,200 Mcf per day; March, 168,600 Mcf per day; November, 129,600 Mcf per day; December, 74,500 Mcf per day. That is for the year 1956.

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By Mr. Morley:

Q. Mr. Farley, with reference to Exhibit No. 219—you have made references to it in your testimony—there is stated that you are presently working on a new storage development. Where is that storage development located and what do you refer to it as? A. I understand that storage development is in Michigan.

Q. Is that the Howell Field? A. I think that is it.

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By Mr. Falahee:

Q. Mr. Farley, yesterday in answer to some questions by Mr. Flax, you stated that the annual contract volume under the storage contract with Michigan Gas Storage was 42,605,000 Mcf. By that, did you mean the present agreement? A. Yes, sir.

Q. Will that contract volume go to 56 million Mcf on November 1, 1955? A. Yes, sir.

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Q. Are there any requirements in Panhandle's tariff that 90 percent of this contract volume—that is, the storage volume—must be delivered during the summer months? A. None that I know of.

Q. And there is no restriction in the Panhandle tariff as to the amount of storage gas which could be delivered in the winter months? A. No, sir, there is not.

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By Mr. Flax:

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Q. Mr. Farley, assuming that Panhandle approaches the end of a winter season and it has not delivered its full winter volume to Canada and also at that point it has not delivered its full winter volume to the storage customers, and let us further assume that at that time it appeared that Panhandle would be able to deliver the winter volume to one of those customers and not to another. In other words, it could cut off either Canada or the storage customers.

7632

Which one would Panhandle cut off?

. . . . . .

Mr. Flax: I will amend my question to this extent.

By Mr. Flax:

Q. To which one would Panhandle deliver the available gas in order to make up its seasonal contract volume? A. You mean make it up in the subsequent months?

Q. No, in that period. A. I think you would have to look at the operating conditions along the line and contact

the customers and see whether or not they could take a cutback.

Q. Suppose both customers felt they could not take a cutback. Would Panhandle attempt to allocate between Canadian and Michigan Gas Storage deliveries, or would they give the gas to Michigan Gas storage to make up their seasonal contract volumes. A. Of course under the tariff the original service has priority over all interruptible deliveries. That is my understanding.

Q. Is the Canadian delivery considered equivalent to an interruptible delivery under the—

7633

A. It is my understanding the new contract is interruptible.

Q. However, it has at least certain characteristics of the storage schedule inasmuch as it has annual volumes, is that correct? A. That's right.

Q. But is it your testimony that the delivery of the annual volumes to the storage customers would take precedence over the delivery of the annual volumes or the seasonal volumes to Canada? A. I think that is right, under the tariff.

7743

L. E. Hanna

Recross-Examination

By Mr. Flax:

Q. Just to clarify this in my mind, Mr. Hanna, according to your more recent statement, you believe that Panhandle could meet a peak day of its contract demands as estimated on Exhibit 27-A of 1,234,242 Mcf, even though deliveries from Trunkline would be reduced to 360,000 Mcf per day by reason of a coincidental peak of all contract demands on Trunkline, and in addition, Panhandle

could deliver 14,500 Mcf on said peak day which would account for a possibility of authorization of all 7(a)'s in these proceedings third year requirements, is that correct?

Mr. William Miller: Excuse me, Mr. Flax, I don't mean

7744

to interrupt, but I believe you used as the 27-A figure 2,234,000-plus. I believe it is 1,232,000.

Mr. Flax: It is 232, but it doesn't include 2 million line tap which has been authorized.

By Mr. Flax:

Q. Do you understand the question, Mr. Hanna? A. Yes, sir.

No, my answer wasn't to that effect. I think the question as put to me by Mr. Miller was that, considering part of that 14,500 Mcf as some of the Trunkline 7(a) applications, and I said the combined systems could meet the demands of the 1 billion 234 million, plus 14,500 Mcf.

Q. Of combined 7(a)'s? A. Yes, sir.

Q. And at the same time, assuming full service of all the present contract demands on Trunkline? A. That's right. With the stipulation that Trunkline only deliver 361 to Panhandle, it might be another question.

Mr. William Miller: In other words, if you add 9,000 on top of what we have been talking about, it might be another question?

The Witness: Yes, sir.

By Mr. Flax:

Q. Wouldn't that happen? In fact, they would deliver

7745

less than 9,000—

Presiding Examiner: For the purpose of the record—

Mr. Flax: Mcf.

By Mr. Flax:

Q. There would be a reduction of more than 9,000 Mcf in Trunkline, inasmuch as Trunkline would also be serving the new 7(a)'s. Is that not the circumstances that would be obtained under the assumptions we have just made. A. Yes, sir, but you are pinpointing Trunkline's capacity to a total of 375,000 Mcf, is that right?

Q. That is the impression I got from Mr. Mast's testimony, Mr. Hanna. A. As I said the other day, since we didn't have any experience in operating under these conditions, we don't know for sure exactly how these two systems will operate. It might be that we can get more from Trunkline and less from Panhandle, or vice versa.

Q. In other words, without taking the individual way that you would accomplish these deliveries, you will say that you could accomplish such deliveries? A. Yes, sir. that is right.

Q. Would your answer be the same if we were to add to your deliveries which we have previously discussed, a volume of 6,460 Mcf additional take-off at the Lewisburg lateral? In asking that question, I assume naturally that

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the Lewisburg lateral for one reason or another will be adequate in size to handle deliveries of that additional volume.

The Witness: May I have the last sentence of that question read?

Presiding Examiner: Read the whole question, Mr. Reporter.

(Question read)

A. There is going to be a limit someplace.

By Mr. Flax:

Q. I appreciate that, but I just want to know whether that is the limit. A. I think that is over the limit. An-

other 6½ thousand Mcf above the 14½ thousand that I have already stated increases to 21,000 Mcf. You are talking about an increase of approximately two percent. I have always considered my calculations within two percent correct. So I would say we would not have capacity for that much more.

Q. How much would you say under the circumstances that you could deliver to the Lewisburg lateral? A. Still assuming that the lateral facilities are reinforced?

Q. Yes, sir. A. I don't think I can specify a certain amount. I

said a moment ago that the 14,000 might be obtained by a combination of conditions on both Panhandle and Trunkline. Perhaps another one or two thousand Mcf might be squeezed through and again it might not.

Q. Mr. Hanna, is your answer based on a physical ability of the pipeline to deliver these volumes, assuming coincidental peaks on all of these customers? A. Yes, sir, that was my understanding of the question, the coincidental peak of all of our customers.

Q. Assuming further, inasmuch as the contract demand provisions of Panhandle's tariff have a 98 percent rachet provision wherein a customer need not pay a billing demand on more than 90 percent of his contract demand if he only takes 90 percent of his contract demand, had you considered in the light of that tariff provision the possibility that some customers would not reasonably take up to their contract demands? A. Your question was, had I considered that?

Q. Yes, sir. A. I didn't consider it in answering this first question.

Q. That is what I want to know.

Q. Because the first question was to the effect that all the customers were on a coincidental peak delivery.

Q. Mr. Hanna, from your knowledge and your experience

7748

in the operations of Panhandle's pipeline, would you say that it is reasonable, because of the latter factors I discussed—that is, the remote possibility of a coincidental peak, plus the possibility that customers will not take up to their contract demands—under those circumstances, Mr. Hanna, would you consider it highly unlikely that Panhandle would ever meet or be called on to meet a coincidental peak of full contract demands of all their customers? A. Yes, sir, I think it is very unlikely that they will ever meet the full demands, the contract demands.

Q. Under those circumstances, Mr. Hanna, that is, the fact that it will be unlikely that they will ever meet a full peak of all contract demands coincidentally, would you then say at your maximum operations that you could serve an additional 6,460 Mcf to the Lewisburg lateral if the lateral was able to take that, and yet at the same time meet all contract demands, or all reasonable requirements that might be called upon by contract demands?

Presiding Examiner: Leave off the word "reasonable," Mr. Flax, in your question. Reasonable doesn't belong there, does it?

Mr. William Miller: I believe it does.

Mr. Flax: I believe it does, Mr. Examiner, because what I mean is all requirements that he might possibly be able to be called upon to meet, based on those contract

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demands.

Presiding Examiner: I see what you mean.

By Mr. Flax:

Q. Do you understand the question?

Presiding Examiner: Read the question, please.

(Question read)

A. In all probability we could.

• • • • • • • • • • •

Q. Generally, Mr. Hanna, under what conditions do you construct or loop laterals and under what conditions do you refuse to construct or loop laterals?

In other words, is it based on a cost of facilities per Mcf sold, or a potential showing of return from the laterals? A. There are a number of things that enter into Panhandle's determination of whether to loop or not to loop, or whether to add facilities on their laterals. Each lateral has to be surveyed on its own merits.

The determination of the addition of facilities on one lateral might not necessarily apply to another lateral. But among those conditions which are considered might be the future market requirements in that area. If Panhandle

thinks that the market requirements are not as good as in some other area, they would no doubt be more reticent in the addition of facilities.

Another factor is the load factor or the degree of saturation in that area. If the lateral serves a town with a high degree of saturation, naturally the load factor is small, and in turn the annual volumes would be small in comparison with the capacity of that lateral.

If Panhandle had to add facilities to take care of a peak day which would be 25 times the average day, it wouldn't be as profitable as if the peak day were only ten times the average day.

I think the condition of the existing facilities would enter into it and the location of the existing facilities. If the existing facility was in a conjested area, then naturally

looping would present quite a problem. Right of way and damages and things like that would make it more expensive.

All of these things determine the economic feasibility of facilities to be added to laterals, which I think Panhandle takes into consideration.

Q. Then there is no set factor such as a cost of the facilities per Mcf to be delivered, on which Panhandle can base its decision to construct the lateral, is that true? A. That's true.

7751

Q. And there is no figure of a percentage of return expected from a lateral that Panhandle can apply to determine whether it shall construct a lateral? A. No, sir.

Q. Does the general relationship of Panhandle to the customer enter into the factors that Panhandle considers as to whether it will construct a lateral, that is, whether it has been able to negotiate successfully with the customer as to volumes and conditions of sale?

Mr. Morley: May I have the first part of the question, Mr. Examiner?

Presiding Examiner: Read the question, please.

(First part of question read)

A. Yes, I believe it does.

. . . . . .

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A. One reason that Panhandle feels that they can't reinforce the Liberty lateral is its location. The Liberty lateral goes through Kansas City. We would be faced with right of way problems.

Another reason is the economic feasibility is not practical. Central West Utility Company and Missouri Power and Light at Excelsior Springs has a high degree of satu-

ration and thus a low load factor on the lateral would result.

Therefore the economics would not be in Panhandle's favor.

Q. Have you examined the plan of construction that has been submitted by Mr. Patterson in these proceedings for Central West Utility Company? A. Yes, sir, I have seen them.

Q. Is your answer the same, based on a construction of that nature? A. It is.

Q. Is it not true that you wouldn't have the problem of going through a highly conjested area if you constructed it according to that plan? A. It is true that it is not as highly conjested through that area, but it is still the suburbs of Kansas City and there is a great deal of building going on in that area.

7778

Q. Do you have any specific economic studies or figures on the cost of construction per Mcf of available capacity or on potential return from the construction such as that indicated by Mr. Patterson, which would reinforce your comments as to it being economically unfeasible? A. No, sir. Mr. Patterson's figures seem to be pretty much in line. So those figures as far as investment goes probably could be used.

But again, consideration wasn't given to the annual volumes in determining the cost of that system.

Q. Have you made any examination of the nature of the area served by Central West or Missouri Power and Light to determine potential industrial customers in that area? A. I am familiar with the area. I haven't made a survey, but I am very familiar with the area.

Q. Are there still areas within the service area of Missouri Power and Light or Central West Utility Company? A. It is my recollection that there are not very many. It

is true there is one. Most of the industrial area is within the franchised area of Gas Service Company.

Q. Is it possible that the availability of gas might permit the expansion of industrial areas within the franchise area of Central West and Gas Service, or have you made any examination to that effect? A. I wouldn't know.

. . . . . .

BEFORE THE FEDERAL POWER COMMISSION

In the Matters of:

Docket Nos. G-1705,
G-1937, G-2433,
G-2475 and G-8665
PANHANDLE EASTERN PIPELINE COMPANY

Docket No. G-2057
MISSOURI PUBLIC SERVICE COMPANY

Docket No. G-2982
CITY OF MONTGOMERY, MISSOURI

Docket No. G-3159
TOWN GAS COMPANY OF ILLINOIS

Docket No. G-4611
MISSOURI CENTRAL NATURAL GAS COMPANY

Docket No. G-4666
VILLAGE OF WESTVILLE, ILLINOIS

Docket No. G-5139
CITY OF WAVERLY, ILLINOIS

Docket No. G-5979
VILLAGE OF ROSSVILLE, ILLINOIS

Docket No. G-8428
CENTRAL ILLINOIS ELECTRIC & GAS COMPANY

Docket No. G-8431
CITY OF WINCHESTER, ILLINOIS

Docket No. G-8471
VILLAGE OF FRANKLIN, ILLINOIS

Docket No. G-8526
CITY OF HICKMAN, KENTUCKY

Docket No. G-8664
TRUNKLINE GAS COMPANY

Docket No. G-8676
CITY OF McLEANSBORO, ILLINOIS

Docket No. G-8677
CITY OF VIENNA, ILLINOIS

Docket No. G-8771
CITY OF CLINTON, KENTUCKY

Docket No. G-8888
CITY OF LA CENTER, KENTUCKY

Docket No. G-8939
CITY OF BARDWELL, KENTUCKY

Docket No. G-8962
CITY OF WICKLIFFE, KENTUCKY

Docket No. G-8963
LAKE COUNTY UTILITY DISTRICT

8205

Hearing Room D
Federal Power Commission
441 G Street, N. W.
Washington, D. C.
Tuesday, 27 September 1954

The above-entitled matter came on for further hearing, pursuant to recess, at 10:00 a.m.

8245

Presiding Examiner: Let us come to order.

It would appear that next in order is the presentation of evidence by Mr. Shannon.

Mr. Shannon: That is correct, Mr. Examiner. We are prepared to present our evidence now. I would like to call Mr. Karl Schmidt as our first witness.

Mr. Shibley: Your Honor, before that is done, I wonder if we might have a statement by counsel as to how many witnesses they will have, so we can plan our time a little bit, and also the subject matter of the evidence intended to be covered by them.

Mr. Shannon: We expect to have three witnesses, Mr. Examiner. The first witness will present the general situation of Michigan Consolidated, including a showing in this record of its physical facilities it serves or attempts to get gas from Panhandle for, and the I-1 Schedule, and our desire to purchase gas under the I-1 schedule.

We will show that we have a market for the gas which Panhandle is proposing to export to Canada, and that we stand ready to execute a service agreement under the I-1 Schedule, and secondly, that as that schedule provides, it must be offered first to us and other customers desiring to purchase it.

8246

The second witness will cover the matter of storage of the Howell field in Michigan. The third witness will cover the matter of Panhandle's rate structure and make certain representations as an expert with respect to changes which have been made in Panhandle's LS-1 form of rate.

Karl E. Schmidt

was called as a witness, having been first duly sworn, was examined and testified as follows:

Direct Examination

By Mr. Shannon:

Q. Please state your name and your position with Michigan Consolidated Gas Company? A. My name is Karl E. Schmidt, and I am vice president and engineer of Michigan Consolidated Gas Company.

Q. Briefly state your educational background and your experience with Michigan Consolidated?

8247

A. I am a graduate in mechanical engineering from Wayne University in 1935, and obtained my Master's Degree in engineering in 1936. I am a registered professional engineer in the State of Michigan.

Since 1936, I have been employed by Michigan Consolidated Gas Company in various technical capacities. During the period of my employment I have served as technical assistant in the engineering department and as assistant to the engineer and assistant engineer.

I became engineer of the company in September of 1952 and in February 1953 was elected vice president and engineer.

Q. What are your duties as engineer of the company, and particularly what are your duties and responsibilities with reference to gas supply and the markets of the company? A. As engineer of Michigan Consolidated, it is my responsibility to be familiar at all times with the market requirements in the areas which we serve and to determine the ability of the company to serve these markets with the supply of gas which it has available from various sources.

All market forecasting in connection with our budget and with the planning of our distribution system is under my direction. In addition, I have direct charge of such matters as the design of our distribution system, specification of construction materials, our laboratory and testing division, the corrosion control of our system, short-wave communications

8248

systems of the company, and other general engineering matters.

Q. Please briefly describe the areas served by Michigan Consolidated. A. Michigan Consolidated serves approximately 790,000 customers in the State of Michigan with natural gas through seven operating districts. These districts are: Detroit, Ann Arbor, Grand Rapids, Muskegon, Mt. Pleasant, Big Rapids, and Greenville-Belding.

These operating districts are integrated through a network of pipelines. In addition, the company serves propane gas to customers in the City of Ludington, Cadillac, and Traverse City.

Included in the distribution areas served by the company are a large number of industrial plants and large commercial users of natural gas. Michigan Consolidated supplies natural gas to approximately 3,000 industrial customers.

Mr. Shannon: Mr. Examiner, I would like to ask at this time that there be marked for identification a single page document which is a map and has the legend in the lower right hand corner "Map of Lower Michigan Showing Michigan Consolidated Gas Company Transmission System and Service Areas."

Presiding Examiner: Exhibit 227 for identification.

(The Document above referred to was marked as Exhibit No. 227, for identification)

8249

By Mr. Shannon:

Q. Referring to Exhibit 227 for identification, would you state what this document is? A. Exhibit 227 is a map of Michigan Consolidated's transmission system and service areas and shows the seven operating districts previously referred to being served with natural gas and the location of the storage fields in the central portion of the lower peninsula of Michigan.

Q. The storage fields being on the upper right hand portion of this document? A. Upper left hand.

Q. Upper left hand, is that correct? A. That is correct.

Q. Referring to the storage fields, would you point out the fields which are leased to Michigan Wisconsin Pipe Line Company? A. Referring first to the extreme upper left hand corner of the map, as indicated, the Reed City field. Directly below it, about one inch below it, is the Goodwell storage field. Directly to the east of Goodwell, also about an inch, is the Austin storage field, and northwest of the Austin field is the Lincoln Freeman storage field. Those fields are owned by Michigan Consolidated Gas Company—

Mr. Flax: Northeast?

The Witness: Northeast, I am sorry. Those fields are

8250

owned by Michigan Consolidated Gas Company and leased to the Michigan Wisconsin Pipe Line Company.

By Mr. Shannon:

Q. There are indicated lines from the Goodwell field, the Reed City field and the Lincoln Freeman field into the

Austin field. Are those lines operated by Michigan Wisconsin also? A. They are.

Q. Going from Austin field southwest, there is a pipeline with the legend "Michigan Wisconsin Pipeline Company." Is that line owned and operated by Michigan Wisconsin? A. It is.

Q. Going to the Austin field again, there are two lines running toward Detroit with the legend "2-24-inch 140 miles." Are those the lines owned and operated by Michigan Consolidated? A. They are.

Q. Just to the southeast of Austin field there is indicated the Six Lakes field. Is that field a field of Michigan Consolidated's? A. It is owned and operated by Michigan Consolidated, yes.

Q. Going into Detroit there is a pipeline from the south with the legend "Panhandle Eastern Pipe Line Company." Is that the line owned and operated by Panhandle?

8251

A. It is.

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8255

Q. Mr. Schmidt, do you have there before you a copy of Exhibit 229 through 236, both inclusive? A. I do.

Q. Are these document true and correct copies of correspondence between Panhandle Eastern Pipe Line Company and Michigan Consolidated Gas Company as they purport to be? A. They are.

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8268

Q. Mr. Schmidt, does Michigan Consolidated Gas Company still desire to purchase up to 100 million cubic feet of gas per day from Panhandle under Panhandle's I-1 rate schedule? A. It does.

Q. Is Michigan Consolidated willing to execute the service agreement contained in Panhandle's tariff covering the purchase of this interruptible gas from Panhandle? A. It is.

. . . . . .

8269

Q. Does Michigan Consolidated desire to purchase from Panhandle the additional volumes of gas which Panhandle proposes to sell to Union Gas Company of Canada? A. Michigan Consolidated desires to purchase at least this volume of gas from Panhandle which will be in addition to the 127 million cubic feet per day, which Michigan Consolidated is now purchasing from Panhandle on a firm basis.

Q. Does Michigan Consolidated have an available market in its Detroit district for the sale of the additional volumes of gas which Panhandle is proposing to export and sell to Canada? A. It does.

Mr. Shannon: Mr. Examiner, I ask that there be marked for identification at this time a single-page tabulation which has the heading "Michigan Consolidated Gas Company, Tabulation Showing Certain Additional Interruptible Sales Available to Michigan Consolidated Gas Company."

Presiding Examiner: The exhibit will be marked 237 for identification.

(The Document above referred to was marked as Exhibit No. 237, for identification)

8270

By Mr. Shannon:

Q. Mr. Schmidt, was Exhibit 237 prepared by you or under your direction and supervision? A. It was.

Q. Please explain what you have undertaken to show on this exhibit?

Mr. Shibley: Your Honor, I would like a little voir dire on this. I listened to the witness' qualification. I don't believe he has testified at all with respect to making market estimates. Might I be permitted to examine the witness with respect to his qualifications?

Presiding Examiner: Yes, on voir dire.

By Mr. Shibley:

Q. Mr. Schmidt, you are a vice president of Michigan Consolidated Gas Company, is that correct? A. That is correct.

Q. Vice president of engineering? A. Vice president and engineer.

Q. Who customarily makes the market surveys for Michigan Consolidated Gas Company? A. All market surveys made by the company are made under my direction and supervision.

Q. Who makes the surveys? A. Individuals under my supervision.

Q. Can you give us the names of the individuals who

are primarily charged with that responsibility?

Mr. Shannon: I object, Mr. Examiner. The witness has stated that he has the responsibility. It is immaterial who works under him.

Mr. Shibley: Your Honor, I don't believe we are at that stage of the game yet. We haven't been able to determine just what his responsibility is. It is very easy for a man to say that he is higher in the echelon than somebody else. I am trying to find out whether he knows anything about it.

Presiding Examiner: I will let him answer.

(8271)

The objection is overruled.

Mr. Shannon: May I have the question read back?

Presiding Examiner: Read the question.

(Question read)

A. I am.

By Mr. Shibley:

Q. Did you testify as to market estimates in the recent proceedings before this Commission with respect to market in the American-Louisiana Pipe Line Company case? A. I don't think I did.

Q. You testified as to engineering, isn't that correct? A. I did.

Q. And other persons testified as to the market of Michigan Consolidated Gas Company, is that correct?

8272

A. If you will recall the record in Docket G-2306, which you are referring to, it will indicate that the American Natural Gas Service Company submitted a questionnaire to all of the customer-companies of American-Louisiana and Michigan-Wisconsin. The testimony in that case was given by a representative of American-Louisiana, who testified that he received the information for Michigan Consolidated from me.

Q. Is this the same information? A. No.

Q. Are any of the companies on this exhibit the same companies that were the subject matter of his testimony? A. No.

Q. These are all new proposed industrial interruptible customers? A. They are beyond those which appear in Docket G-2306.

Q. Have you had contact with any of these companies

with respect to this sale? A. Under my supervision, all of these were contacted.

Q. I mean have you personally? A. Personally? Obviously, no.

Q. Do you have any notion as to what the cost per ton of the coal that is presently used by Infant Diaper Service of 4620 15th Street is?

. . . . . .

8273

A. I have a little more than a notation. The delivered cost of coal per ton during the year 1954 was $11.75, as indicated on Exhibit 237.

By Mr. Shibley:

Q. That is where you got your answer. You didn't talk to the Infant Diaper Service, did you?

. . . . . .

8275

A. I do not, but men under my supervision did, which is a normal part of my functions for which I am responsible.

By Mr. Shibley:

Q. A normal part of their function? A. My functions.

Q. You didn't make any market estimate. Is that the fact? A. All market estimates of Michigan Consolidated are made under my supervision and direction. I have made hundreds of them in my time. At the present time they are all made under my supervision.

Q. But this isn't one of the hundreds that you have made. Is that the fact? A. As I stated many times before, this one was made under my direction and supervision.

Q. I am asking you whether you made it? A. I am responsible for it. So in effect, I made it.

(8275)

Q. You will be able to give us the answers on cross-examination as to the needs of all of these companies and all of that material? Is that the fact?

Presiding Examiner: It seems to me, Mr. Shibley, that this witness has shown an ample foundation and is qualified respecting this exhibit.

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8278

By Mr. John McGrath:

Q. Did you personally prepare any working papers in regard to these potential customers set forth on Exhibit 237? A. Personally I did not.

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By Mr. Shannon:

Q. Mr. Schmidt, referring to Exhibit 237, will you state briefly what you have undertaken to show on this exhibit? A. This exhibit shows a portion of the additional interruptible sales available to Michigan Consolidated in its Detroit District, which could be made with the volumes of gas which Panhandle is proposing to sell to the Union Gas of Canada.

Q. Are there sales shown on this Exhibit 237 in addition to the sales requirements which were shown by Michigan Consolidated in the American-Louisiana proceedings, Docket No. G-2306?

8279

A. In the American-Louisiana proceedings, testimony was presented showing a portion of the interruptible requirements of Michigan Consolidated's market areas. But

such requirements were limited with two minor exceptions to the volumes of gas which would replace oil. This exhibit shows interruptible sales available to Michigan Consolidated which are in addition to those shown in the American-Louisiana proceedings.

Q. Referring to Exhibit 237, would you state how this exhibit was prepared? A. This exhibit was prepared on the basis of a recent survey of the requirements of the customers listed on the exhibit. In each case, the customer contacted has furnished us data with respect to his present consumption of coal and the delivered price of such coal. With this information, we then converted on the basis of equivalent efficiency the present solid fuel consumption into the equivalent Mcf of natural gas, and converted the current prices being paid by the customer for coal into the equivalent cost of natural gas.

Q. How were the delivered costs per ton of coal shown on this exhibit determined? A. These were determined upon the basis of delivered prices in 1954. This does not, of course, take into consideration the anticipated increase in the cost of solid fuel resulting from recent wage increases in the coal industry.

8280

When these wage increases are reflected in higher prices, the delivered cost of coal to these customers will be increased accordingly.

Q. At what price per Mcf in your opinion would Michigan Consolidated be able to attach these additional interruptible sales? A. Based upon our experience, I am confident that we can attach these customers and make the

interruptible sales in the volumes shown at a rate of 35 cents per Mcf.

Q. On what do you base that opinion? A. It has been the experience of Michigan Consolidated over many years that gas is recognized by commercial and industrial consumers, as well as the general public, as a premium fuel for which they are willing to pay a price higher than the equivalent cost.

It has been our experience that customers such as these have been willing to convert to gas at rates at least 15 percent greater than their present fuel costs.

On this basis, it is our judgment that we would have no difficulty in disposing of this gas at a price of 35 cents.

Q. Would you state some of the factors which enables gas to sell at a premium? A. The principal reason is the reduction in the operating and maintenance expenses resulting from the use of gas. For example, the prices which are shown on this exhibit under

the hearing "Delivered Cost Per Ton," are the prices of the coal laid down in the yard or in the bin of the customer. In addition to this cost, the customers also pay the cost of getting the fuel from this point into his equipment.

This certainly involves a cost of handling, and in many cases this cost may be considerable if it involves the transfer of coal from a storage pile which may be some distance from the point the fuel is used.

There is also the matter of ash handling and disposal, and this is an item of considerable expense, particularly in the volumes of coal which are shown here.

There is also, of course, a tremendous advantage to the customer in the use of gas in that he does not have to maintain a large inventory. There is no purchasing expense involved. There is no expense of scheduling the receipts of solid fuel.

There is also the advantage to the customer of not tying up his cash in advance to the use of the fuel. In the case of gas, he does not pay for the fuel until sometime after it has been consumed. In addition to these very tangible benefits, there are many intangible advantages to the use of natural gas. It is, of course, cleaner than solid fuel, and therefore results in less maintenance expense around the property.

It eliminates entirely the smoke problem and therefore it results in improved community relations and better

conditions in which to work and live.

Q. Are all the customers shown on this exhibit located in the present service area of Michigan Consolidated? A. Yes, they are.

Q. What facilities would Michigan Consolidated be required to install in order to serve the customers shown on this exhibit? A. Other than small betterments of supply, which are a part of our normal annual construction requirements, there are no major facilities required to serve the customers on this exhibit. It is my opinion that service could commence promptly if Panhandle would comply with its interruptible rate schedule and supply us with the gas.

* * * * * * * * * *

8284

Q. Mr. Schmidt, are you familiar with the type of service which Michigan Consolidated proposes to render to industrial customers with the gas to be obtained from American-Louisiana? A. I am.

Q. You are familiar, are you, with the type of service which Michigan Consolidated proposes to render to customers at a 35 cent rate if it gets this interruptible gas from Panhandle? A. I am.

Q. Would you compare the two types of service, namely, the type of service that Michigan Consolidated would render with the American-Louisiana gas and the type of service that Michigan Consolidated would render with the gas to be obtained from Panhandle under the I Schedule? A. With the gas received from American-Louisiana, the company proposes to offer service which would be firm for an

8285

eight month period of time and interruptible during the winter period. This service will, of course, be of greater value to the customer than the interruptible service which would be provided at a rate of at least 35 cents.

We contemplate that under the type of service proposed by American-Louisiana, that interruptions during the winter months would be made only upon 30 day notice to the customer, except in an emergency. Because of the greater guarantees of continuity of service, we will naturally receive a higher rate for the sale of gas of this type of service.

In the case of a customer shown on this exhibit, it is proposed that the service would be interrupted upon six hours' notice and would be available only when the gas was provided by Panhandle under its I-1 schedule.

Q. There is a provision in the interruptible I-1 schedule of Panhandle with reference to 20 percent of the gas being made available for storage. In view of that, I would like to ask you to state whether or not Michigan Consolidated now has storage facilities with which it could store 20 percent of the gas which it obtained from Panhandle under I-1 schedule?

. . . . . .

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A. Michigan Consolidated now owns and operates the Six Lakes storage field which has a working storage capacity of some 53 billion cubic feet. Even though it is contemplated that the Six Lakes field will be used in connection with the gas received from American-Louisiana, it has more than ample capacity to store 20 percent of the gas proposed to be sold to the Union Gas of Canada.

In addition to Six Lakes, Michigan Consolidated now also

8287

owns the Winfield field, Norwich field and Orient storage field, the working storage of these being about 14 billion cubic feet when fully developed.

All of these storage fields lie in an area in the central part of the lower peninsula of Michigan and are connected to the integrated system of the company. The additional facilities necessary to develop Winfield, Orient and

Norwich could be installed promptly when the need for their use arises.

By Mr. Shannon:

Q. Mr. Schmidt, are you familiar with the capacity of the Panhandle system to deliver gas to Michigan Consolidated at Melvindale? A. I am.

Q. Would you state whether or not Panhandle could, with its existing facilities, deliver to Michigan Consolidated the volumes of gas which it is proposing to supply to Union Gas Company of Canada? A. Article V, paragraph 4, of the contract between Panhandle and Union Gas of Canada indicates that Union Gas of Canada shall not be obligated to take more than 55,000 Mcf on any one day.

Article VII, paragraph 1 of the contract provides that Panhandle will deliver gas to Union Gas of Canada at not less than 260 p.s.i.g.

The delivery is made at the international boundary

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in the middle of the Detroit River. Panhandle has a loop line up to its Pelham Road regulator station, which is located in Allen Park, Michigan, in the service area of Michigan Consolidated. From that point, Panhandle has a 22-inch line which extends to the measuring and regulating facilities at River Rouge where delivery is made to Michigan Consolidated.

With a pressure of 260 pounds at the Pelham Road station, Panhandle can transport about 312,000 Mcf per day through the 22-inch line to Michigan Consolidated.

. . . . . .

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Q. What would be the revenues which Michigan Consolidated would receive if it were to purchase the 15½

billion feet of gas from Panhandle under its I-1 schedule and sell this gas at the rate of 35 cents per Mcf which you discussed before lunch? A. Michigan Consolidated would receive from its customers $5,425,000 of gross revenue from the sale of this gas on an interruptible basis at a rate of 35 cents per Mcf. As I indicated before, the cost of this gas to Michigan Consolidated would be $4,076,500.

As I stated, these sales would be made without any additional investment by Michigan Consolidated. There would be only a limited number of customers involved, and the expense in connection with these sales would therefore be negligible. The result would therefore be that Michigan Consolidated would receive additional net revenues of $1,348,500. And these revenues would provide rate benefits to all of Michigan Consolidated's customers.

This would, of course, represent the minimum benefits which the rate payer would receive. If a portion of this gas were stored and later sold to other classes of customers, the amount of revenues would be increased. The extent of these

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benefits can be seen from the fact that Michigan Consolidated serves approximately 453,000 domestic customers, and if it received additional net revenues of $1,348,500 from the sale of Panhandle's excess gas, then this revenue is equivalent to a savings per customer of approximately $3 per year.

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8292

J. E. Spindle

was called as a witness, having been first duly sworn, was examined and testified as follows:

(8292)

Mr. Shannon: Before I go ahead with Mr. Spindle's direct examination, Mr. Examiner, I want to offer for identification a document, being certain excerpts from the testimony of Mr. M. K. Hager on December 17, 1952, in the matter of Panhandle Eastern Pipe Line Company, Docket Nos. G-1767, et al.

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As the document indicates, there are excerpts from his direct examination.

Presiding Examiner: Exhibit 238 for identification.

(The Document above referred to was marked as Exhibit No. 238, for identification)

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Direct Examination

By Mr. Shannon:

Q. Please state your name and your position with Michigan Consolidated Gas Company? A. My name is J. E. Spindle, and I am general manager of the production and pipeline district of Michigan Consolidated Gas Company.

Q. Please briefly state your educational background and your duties as general manager of the production and pipeline district, as well as your experience with the company? A. I am a graduate engineer with a Bachelor of Science degree in civil engineering and registered in the State of Michigan. I work for Michigan Consolidated Gas Company or predecessor companies for a period of 38 years. Since the development of natural gas in Michigan, one of my duties has been to follow the development in all areas of the state, and as a result I am familiar with the production of natural gas in the State of Michigan.

Later, when storage was found necessary, it became one of my duties to acquire and develop dry natural gas fields for storage purposes. In this capacity, I have supervised the acquisition and development of eight storage fields with a total capacity of 100 billion cubic feet of working storage.

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The most recent project of this nature has been the acquisition in 1953 and the development of Six Lakes storage field of Michigan Consolidated, which has a working storage capacity of approximately 53 billion cubic feet.

In connection with my duties with Michigan Consolidated, I have testified on numerous occasions before the Michigan Public Service Commission and the Federal Power Commission on matters relating to the development of storage facilities.

Q. Mr. Spindle, are you familiar with the Howell gas field in Michigan? A. Yes, I am.

Q. Would you please state the location of this field? A. The Howell field is located approximately 30 miles northwest of the City of Detroit in Marion, Genoa, Howell and Osceola townships of Livingston County. This field was developed by Panhandle Eastern Pipe Line—

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Mr. Hunt: I would like to make a statement, Mr. Examiner, for somebody who hasn't seemed to be represented thus far. I represent Illinois Power Company, also a customer of Panhandle, who up to now had hoped to be outside of this donnybrook that is continuing between Michigan Consolidated and Panhandle.

I didn't say anything this morning in support of Mr.

Shibley's position because I was laboring under the hope at that time—which now is a vain one—that Mr. Shannon said he could probably complete his case in an hour without interruptions. Obviously that is optimistic. Now we are

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faced with the situation of further day, further harassment, and further obstructionist tactics, to keep these certificate proceedings from coming to a close when you have present customers of Panhandle who are interested in peak day demands, who have signed negotiated agreements, and who are met with a real critical emergency for the ensuing heating season, that unless this construction is completed they will be in a very critical situation.

It is hard for me to see, Mr. Examiner, on the basis of the reasons thus far set forth by Mr. Shannon in both the lines of evidence he sought to produce, that it is any more than just a continuation of this feud between these companies which I have no objection to in and of itself; but when it starts involving people who are in no way responsible for it, I cannot stay here and acquiesce in this sort of procedure without registering a strong protest on the part of my client, because it seems to me it is not only unfair, but it is a travesty on this Commission to make customers such as my client—and, though I don't speak for them, you heard Mr. Nafziger for Central Illinois Public Service Company and Mr. O'Hern for Central Illinois Light Company, state on the record what the critical nature of their situation is.

If Michigan Consolidated wants to retire into a corner and slug it out with Panhandle, that is all right with us. But we do protest vigorously these delaying tactics and this.

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continual harassment which we are afraid are going to keep these certificate proceedings from closing and find us in a very unfortunate pinch for this winter heating season.

. . . . . .

By Mr. Shannon:

Q. I asked Mr. Spindle to state, if he knows, what company developed the Howell Field and where the gas from that field has been sold. A. Howell Field was developed by the Panhandle Eastern Pipe Line Company and the gas from this field has been sold to Consumers Power Company.

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Q. Will you tell us now, Mr. Spindle, in general the physical characteristics of the Howell Field? A. The Howell Field produces gas from the lower part of the Salina formation at a depth of about 3800 feet below the surface. The field lies in a northwest-southeast position, limited by a fault on the southwest flank. From this fault the horizon dips to the north and the east.

The productive area covers about 5,000 acres and the field—

Mr. Shibley: Your Honor, I hate to interrupt this testimony again, but it does seem to me that we are getting into details here without a showing again, except of the testimony by

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Mr. Spindle, that he is generally familiar with storage in Michigan.

(8318)

I think again we are going to have to have voir dire on this to determine the basis for his information as to these matters. Would that be appropriate, your Honor?

Presiding Examiner: Very well, you may examine on voir dire.

By Mr. Shibley:

Q. Mr. Spindle, have you ever been employed by the owners of the Howell Field to conduct any geological investigation? A. No, sir.

Q. Who is in fact your employer? A. Michigan Consolidated Gas Company.

Q. When did you commence your inquiry into the Howell Field? A. The inquiry into the Howell Field commenced when the first well was built in the Howell Field.

Q. Is that the basis upon which you are testifying today? A. Yes, sir. We have a record of every well drilled in the field after it is public property. You understand these permits are taken through the Conservation Commission. The logs are filed within thirty days, and in ninety days thereafter it is public property.

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We have a standing order with the Commission to get the logs and we also have a connection with Michigan Public Service Commission to get copies of their tests after they become public property. So this information came from our own files.

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Q. Do you know as a matter of fact whether all of the wells have been in fact made a matter of public record? A. Yes, they have. We have copies of the tests.

Q. What is the basis for your statement that all of them have been made available? A. There is in the State of

Michigan a scout association in which we have a member. They meet weekly to report progress on all drilling operations and exchange that information on an area basis, and those scouts have what they term a scout ticket so that we have a running record of all drilling operations constantly during the drilling performance.

Q. Are you a member of the scouts? A. No. We have a man from our office who is a member of the scouts.

Q. And it is on the basis of his luncheon meetings with the other scouts that you are testifying as to the Panhandle Howell field storage feasibility? A. That is the basis of your question when did I first get the information. The official information I am referring to here comes from the records of the Michigan Public Service Commission after the wells have been tested.

Q. Do they have anything in the Michigan Public Service Commission record as to the acreage figure which you just gave? A. No, sir.

Q. Where did you get that figure?

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A. That is our assumption of the wells which are located on a map.

Q. What do you mean by "our assumption"? A. Giving a limited area outside of the actual location of the producing well, assuming that the well will produce from a certain area beyond the actual diameter of the well bore.

Q. But what assurance do you have that you have all the well locations? Because the scouts talked about some of them? A. The assurance comes from the public record. That gives the definite location geographically, the distance from certain section points, and every geographical dimension that you could need.

Q. Do you have any basis for knowing whether or not

the public records contain all of the well information with respect to the Howell field?

. . . . . .

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A. I think perhaps I could answer that by saying in many trips through the area and knowing the general location of section and township lines, that I can say of my personal knowledge that they are correct.

By Mr. Shibley:

Q. When did you make your last trip through the area? A. I go through that area at least three or four times a month.

Q. When you say "through that area," how close to the Howell field do you mean? A. Right through the section of it, the middle of it. The highway runs right through the middle of it.

Q. You can generally tell by observation how big the storage reservoir is? A. No. That has nothing to do with the storage reservoir. The storage reservoir estimate has to come from a study of the map after you locate these wells on the map, and then our personal knowledge of the operation of storage

8322-A

fields and an estimate of the area beyond the well bore in which that would be effective.

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8322-B

Presiding Examiner: The Examiner is of the view that a sufficient basis has been laid for his answer to the pending

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question.

Will you proceed, Mr. Spindle?

The Witness: The productive area covers about 5,000 acres and the field is five and a half miles long by two miles wide, with a field discovery pressure of 1602 pounds per square inch gauge at the wellhead.

The initial production started in January 1947, and a total of 18½ billion cubic feet has been withdrawn, with pressure reduced to approximately 600 pounds.

There has been apparently little trouble from water, as evidenced by a pressure test made by the engineering department of the Michigan Public Service Commission, which showed little or no deterioration to a pressure of approximately 900 pounds wellhead gauge.

The production history indicates a volume of 18-4/10 million cubic feet per pound of pressure change.

By Mr. Shannon:

Q. Mr. Spindle, based upon your knowledge of this field, and your past experience in the acquisition and development of storage fields in the State of Michigan, will you state whether or not in your opinion the Howell field can be developed as a storage reservoir for use by Panhandle? A. Yes. In my judgment, based upon the production record today, a storage cycle from 500 pounds base pressure to 1500 pounds top wellhead pressure, a storage capacity of

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18-4/10 billion cubic feet could be utilized. The base pressure of 500 pounds has been selected because of possible water encroachment and low deliverability rates below that figure.

The top pressure of 1500 pounds has been selected because of the excessive horsepower requirements which

would be required for pressure in excess of that amount, although there are several storage fields in the country operating at pressures in excess of 1500 pounds.

Mr. Shannon: Mr. Examiner, I will ask that there be marked for identification a single page document, which has the title in the upper right hand corner "Howell Gas Field, Livingston County, Michigan," and in the lower right hand corner "Michigan Consolidated Gas Company, Production and Pipeline District."

Presiding Examiner: Exhibit 239 for identification.

(The Document above referred to was marked as Exhibit No. 239 for identification)

By Mr. Shannon:

Q. Do you have Exhibit 239 for identification there, Mr. Spindle? A. Yes, sir, I have.

Q. Was this document prepared by you or under your supervision and direction? A. Yes, it was made under my supervision and direction.

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Q. What have you undertaken to show on this Exhibit 239? A. It is a structure map of the area and shows the outline of the drilled area known as the Howell gas field. This map shows the location of all of the wells drilled in the area, both dry holes and producing wells. The information shown on the map concerning the wells came from the drilling permits and the logs of the wells issued by the conservation department of the State of Michigan. All of the wells which are shown on the map were drilled by Panhandle Eastern Pipe Line Company and Panhandle is the only operator in the field. The lines shown on the map outlining the storage area indicate the area which probably would be utilized in the storage operation.

As the map indicates, there were 19 wells which have been drilled in the area of the field, 16 of which found gas in commercial quantities, and three were dry holes. Of these 16, two have been plugged, which leaves a total of 14 wells in the field as of this date.

The average open flow capacity of these remaining wells is 5½ million cubic feet per day at a pressure of 1500 pounds per square inch gauge at the wellhead.

Q. Would the deliverability of these wells permit them to be utilized in a storage input and withdrawal operation?

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A. Yes, sir. The operation of the field to date indicates that the wells will operate at a withdrawal rate of approximately 50 percent of their open flow capacity. For example, based upon the average well of 5½ million cubic feet open flow at 1500 pounds pressure, the maximum safe withdrawal rate would be 2,710 Mcf per day from each well at an observation wellhead pressure of 1500 pounds and a wellhead flow pressure of 1200 pounds.

At 1,000 pounds observation wellhead pressure and wellhead flow pressure of 800 pounds, the maximum safe withdrawal rate would be 1,530 Mcf per day per well. At the wellhead observation pressure of 500 pounds and a wellhead flow pressure of 400 pounds, the maximum safe withdrawal rate would be 570 Mcf per day per well.

Q. From the standpoint of storage capacity and deliverability, in your opinion is this field suitable for use as a storage reservoir? A. Yes, it certainly is. Its working storage capacity of 18-4/10 billion cubic feet between observation wellhead pressures of 500 pounds and 1500 pounds would make it the third largest storage field which has been developed in Michigan.

When fully developed, the daily deliverability of this

field would be 282 million cubic feet at a pressure of 1500 pounds per square inch, 159 million cubic feet at a pressure

of 1,000 pounds, and 117 million cubic feet at a pressure of 800 pounds.

This deliverability clearly shows that the field is an excellent source of gas delivery for peak day loads.

Q. Have you made any estimate of the cost of fully developing this storage field? A. Yes, I have. Based upon my estimates, the total cost of such development to Panhandle Eastern would be approximately 8½ million to nine million dollars. This would include three general types of costs, namely, acquisition, development, and compression station and dehydration plant costs. The acquisition cost would consist of acquiring the storage rights which would probably run about $20 an acre on the 8,640 acres, or a total cost of about $117,000.

In order to further develop the storage field, Panhandle would probably be required to drill 90 storage wells and install a gathering system at an average cost of about $55,000 per well, for a total of $4,950,000. Panhandle would probably be required to drill five wells to delimit the field. These five wells would be somewhat cheaper and the average cost would be about $40,000 per well, or a total of $200,000.

Thus, the total development cost would be $5,150,000. Panhandle would also be required to construct a compressor station and a dehydration plant. The compressor station

would require 9,240 horsepower, assuming 400 pound suction pressure, and 1600 pound discharge for injecting 100 million cubic feet per day at 1500 pounds field pressure.

On August 16, 1955, Panhandle presented evidence before the Michigan Public Service Commission in support of an application to install 2,000 horsepower of compressors in its Howell field. Testifying in support of that application, Mr. Frederick Culvern, senior engineer of compressor station construction design for Panhandle testified—

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The Witness: —testified that the total cost of the 2000 horsepower installation would be $557,000. This is an average cost per horsepower of $280.

At the same cost per horsepower, the total additional cost to Panhandle of installing 7,240 horsepower at the Howell Field would be $2,027,000. In addition, Panhandle would be required to construct a dehydration plant at a cost of approximately $400,000. The total cost of acquiring the storage rights, drilling the wells, constructing the gathering system, and installing the necessary horsepower and dehydration plant,

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would be approximately $7,750,000.

If 10 percent is allowed for contingencies, this total additional cost to Panhandle of developing the Howell Field as a storage reservoir would be about $8,525,000. With a working storage capacity of 18.4 billion cubic feet of gas, the cost per Mcf of developing storage in the Howell Field would be only 46 cents per Mcf. This is a very reasonable figure and obviously the project is not only economically feasible, but extremely desirable from an economic standpoint.

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Q. Mr. Spindle, in your opinion how much time would be required to fully develop the Howell Field as a storage reservoir? A. At the present time the Howell Field is now approaching the base pressure of 500 pounds, which I have assumed for my determination of its storage capacity. Panhandle has received the authority of the Michigan Public Service Commission to install 2000 horsepower of compression in the field; and Panhandle testified at the hearing that, led to that authorization, it intended to commence construction—

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The Witness: —to install 2000 horsepower compression in the field, and that it intended to commence construction on September 1 and install the additional horsepower as quickly as possible.

As I have previously stated, Panhandle now has 14 operating wells, and a gathering system installed in the field and I see no reason why Panhandle could not begin injecting gas into the storage area immediately. It should also be noted that in its presentation to the Michigan Commission, Panhandle said that the piping, valves and fittings for the compressor station will all be designed for a working pressure of 2000 pounds per square inch gauge.

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Q. What significance, if any, Mr. Spindle, do you attach to the fact that the fittings, etc., on the compressor station would be designed for a working pressure of 2000 psig? A. The fittings and equipment are designed for 2000 pounds pressure range. It is above the range of pressures that

we have been talking about, namely, 500 pounds to 1500 pounds. Therefore it is satisfactory for a storage operation as I have described.

Q. How long in your opinion would it take to drill the additional storage wells? A. It would be possible to drill all of the storage wells in one construction season.

Q. How long would it take to install the additional horsepower? A. Approximately the same time, one construction season.

Q. Is it necessary that the field be fully developed before it could be utilized to store gas? A. No, sir. Gas could be injected into the field at the

8335

present time, and the rates of injection could be increased as additional facilities were added and the gas could be withdrawn from the field by utilizing the facilities as they are developed.

Q. Mr. Spindle, are you familiar with the pipe line facilities which Panhandle now has installed to the Howell Field? A. Yes, I am.

Q. Would you briefly describe those facilities?

Mr. Shibley: I would like to have the witness state the basis for his familiarity.

Presiding Examiner: How do you know, Mr. Spindle?

The Witness: Records from the office of the Michigan Public Service Commission. Maps are filed at the completion of all pipe lines and they become public records.

Presiding Examiner: Very well, proceed.

Mr. Shibley: I was going to ask him when he last looked at that material.

The Witness: I looked at our map the day before I left to come down here.

Mr. Shibley: But it is not your map that you got this information from, is it?

(8335)

The Witness: The information was transferred from the official map of the Commission to the map that we have in our office.

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Mr. Shibley: By whom?

The Witness: By our office; one of the men in my office.

By Mr. Shannon:

Q. Now would you describe those facilities of Panhandle? A. Beginning at Freedom Junction, and Freedom Township of Washtenaw County, Panhandle has an 18-inch line which extends northeast to Milford Township in Oakland County. At that point this 18-inch line is reduced to a 16-inch line, and from that point a 10-inch and 8-inch pipe line fifteen miles in length extends westward to the Howell Field.

Q. Mr. Spindle, if it proved to be necessary to install any looping on the Panhandle line to the Howell Field, how long in your opinion would it take to construct such a loop?

. . . . . .

A. It is generally conceded in pipe line construction that is organized that a mile of pipe can be laid in one day. We are talking about fifteen miles, so this could be built

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in one month.

By Mr. Shannon:

Q. Mr. Spindle, would you state whether or not in your opinion the volumes of gas which Panhandle is proposing to sell to Union Gas Company of Canada could be stored in the Howell Field?

Mr. Shibley: Just a minute, Mr. Shannon. Do you know what the volumes are, Mr. Spindle?

The Witness: I understand we are talking about 15 billion cubic feet.

Mr. Shibley: Where did you get that information?

The Witness: From the news of this hearing.

Mr. Shibley: From counsel?

The Witness: Yes, I have heard it discussed in counsel's office.

Mr. Shibley: Thank you.

A. It is my opinion, and it is obvious from the capacity that we have been discussing, that Panhandle would have no difficulty in storing such volumes of gas in the Howell Field, and this gas could be withdrawn at rates which would provide a very substantial increase in the peak day capacity of the Panhandle system.

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Karl E. Schmidt

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Cross-Examination

By Mr. Shibley:

Q. Mr. Schmidt, you have testified concerning Michigan Consolidated's proposed markets, have you not? A. I have.

Q. And you are thoroughly familiar with the supplies of gas which you presently have. Is that true? A. I am.

Q. And the supplies of gas which you expect to have in the future? Is that correct? A. I am.

Q. Will you please state for the record who your

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suppliers are? A. Presently they are the Panhandle Eastern Pipe Line Company and the Michigan Wisconsin Pipe Line Company.

(8408)

Q. Are you an officer of the Michigan Wisconsin Pipe Line Company? A. No.

Q. The only position that you have with the seven or eight companies in the holding company system is with Michigan Consolidated, is that correct? A. That's right.

Q. Does that apply also to the American Natural Gas Service Company? You are not an officer or employee of that company? A. I am not.

Q. However, you are familiar with the operations of those companies, is that correct? A. Yes.

Q. Has Michigan Wisconsin been obligated under your contract with them to supply your entire requirements, less 127,000 Mcf per day?

Mr. Shannon: I will object, Mr. Examiner. That calls for a legal conclusion. The service agreement speaks for itself.

Presiding Examiner: Read the question, Mr. Reporter.

(Question read)

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Presiding Examiner: Objection overruled. If the witness knows, he may answer. A. That is my understanding of the service agreement. I am not a lawyer, as you know.

By Mr. Shibley:

Q. Yes.

Has Michigan Wisconsin delivered to you during the period that that contract has been in existence, Michigan Consolidated's entire requirements less the 127,000 per day? A. Up to now they have.

Q. What would your requirements have been, let's say at this time, peak day requirements of Michigan Consolidated? A. I don't know if I quite understood your question. Are you asking what the peak day requirements of the company have been?

Q. Yes. I am making the distinction which I would like to have you make between the requirements and the deliveries. Can you make that distinction in answering the question as to whether or not Michigan-Wisconsin has met your requirements? A. They have met the peak day requirements of the company under its restricted market.

Q. What restricted that market? A. We have up until recently been restricted on the addition of space heating in the company and up until a relatively short time ago restricted as to the addition of

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industrial customers using over 500 Mcf per month.

Presiding Examiner: By whom?

The Witness: By the Michigan Commission.

By Mr. Shibley:

Q. For what reason? A. It was due to the fact that there was an overall shortage on the part of the suppliers to Michigan Consolidated wherein they were unable to meet the total requirements of the company.

Q. Did you say supplier or suppliers? A. I said suppliers.

Q. You are referring to Michigan-Wisconsin? A. I am referring to the companies that supply Michigan Consolidated—both of them.

Q. Including Michigan-Wisconsin? A. Yes, and including Panhandle, too.

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By Mr. Shibley:

Q. Mr. Schmidt, what new supplies of gas does Michigan Consolidated anticipate? A. We anticipate receiving upon

its completion, additional supplies from American-Louisiana Pipe Line Company.

Q. At what date will those deliveries commence? A. I don't know that.

Q. What is your estimate of the time they will commence?

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A. It is my understanding that we are hopeful that American-Louisiana will be completed in the fall of 1956.

Q. Have they started construction of that pipeline? A. I understand they have.

Q. What part? A. I beg your pardon?

Q. What part of the pipeline has been constructed? A. I can't tell you exactly, Mr. Shibley. There is some construction being done on the north end of the line, I know that, because that is adjacent to our service area. I understand some construction is also being done on the extreme south end. Exactly the degree of construction that has taken place, I do not know.

Q. By extreme south end, are you referring to the Louisiana portion or to the portion near Slaughters, Kentucky, where the line ties into Texas Gas Transmission Corporation? A. No, by the south end I meant the southern portion of the line in or around Louisiana. That is merely my understanding, Mr. Shibley.

Q. In what amount will American-Louisiana deliver gas to Michigan Consolidated at the time initial deliveries commence? A. Of course that is a matter of allocation to be determined by the Federal Power Commission. We expect to receive 200 million cubic feet per day.

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Q. You don't anticipate a step-up of deliveries. You anticipate, if I understand your testimony correctly, receiving the full 200,000 Mcf per day at the initial com-

mencement of deliveries, is that correct? A. I don't know that, Mr. Shibley. It is very possible, of course, in any new pipeline project that they will not deliver their capacity immediately upon the commencement of service.

I think experience shows that that is quite generally true. We hope and expect to have an allocation of 200 million cubic feet per day, and we would be desirous of receiving that as soon after commencement of service as it is practical for American-Louisiana to give it to us.

But I don't know how soon after that initial date that would be.

Q. Do you need more than 200,000 Mcf of gas per day from American-Louisiana to fulfill your requirements from the fall of 1956 forward? A. I didn't hear the first part of your question.

Presiding Examiner: Read the question.

(Question read)

A. According to the market requirements which we put into Docket G-2306, the 200 million cubic feet per day would be adequate, as I recall it, for a period of three years or so. But at that time additional supplies would be necessary.

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By Mr. Shibley:

Q. Of course there was a lot of material that went into Docket G-2306, but is that your present appraisal of the needs of Michigan Consolidated Gas Company? A. Yes, it is still the same position that we had.

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Q. Will American-Louisiana have available for sale to Michigan-Consolidated interruptible gas? A. I will have

to speak from memory now, but I think it is reasonably accurate. I believe the first and second year after commencement of deliveries by American-Louisiana, there is some gas available over and above the requirements of its two customers. I am not sure, but I believe that is correct.

Q. Does Michigan Consolidated intend to purchase that gas from American-Louisiana? By that gas, I am referring to the excess amount with respect to which you have testified. A. I don't know that American-Louisiana is proposing an interruptible rate. I am not too familiar with the rate being proposed by American-Louisiana.

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Q. No, but from your familiarity with the needs of Michigan Consolidated and its efforts to get interruptible gas about which you have testified, is Michigan Consolidated going to take the position that American-Louisiana should offer it gas under an interruptible rate schedule? A. I am not in a position to discuss that at this time.

Q. Why not? A. The question hasn't been heard by the Commission yet, as far as I know.

Q. In other words, you have been concentrating on purchasing interruptible gas from Panhandle, but have excluded from your consideration the thought of purchasing interruptible gas from American-Louisiana. Is that your testimony? A. My testimony is this, Mr. Shibley: We have, one, a realistic situation, in that Panhandle has an I-Schedule, and it is our position that they have excess gas which should be offered to us under an existing and what we think to be a legal schedule. That is one thing. That is here right now.

The question of American-Louisiana's form of rate or of the allocation of their entire capacity has not been settled yet by the Federal Power Commission. So

obviously we can't establish a position in that matter until those things have been decided.

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Q. Has Michigan Consolidated made any representations to American-Louisiana Pipe Line Company seeking interruptible gas from them or requesting that American-Louisiana institute an interruptible rate schedule? A. Not to my knowledge.

Q. Does Michigan Consolidated intend to do so? A. I don't know.

Q. Can you think of any reason why Michigan Consolidated would prefer to purchase interruptible gas from Panhandle rather than American-Louisiana? A. Only for the reason that I stated before, Mr. Shibley, in that we are speaking now about a realistic and present situation as compared to one which is hypothetical in the future.

Q. Let me get this straight: Does the proposal to purchase interruptible gas terminate at the commencement of deliveries from American-Louisiana, the proposal to purchase interruptible gas from Panhandle? A. No.

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Q. You are thinking down the road beyond the fall of next year, is that correct? A. In so far as our efforts to obtain interruptible gas from Panhandle is concerned? Is that the question?

Q. Yes, that is my question. A. Yes, we are looking down the road.

Q. So that at that time we won't have this sole reason which you have advanced, namely, that Panhandle is a thing in being, is that correct? A. If we don't obtain gas from Panhandle by the fall of 1956, I am sure we will continue our efforts at that time to try to get it.

(8419)

Q. Yes, but I am wondering whether after the fall of 1956 you are going to make efforts to get interruptible gas from American-Louisiana? A. Mr. Shibley, I don't know that there will be interruptible gas available from American-Louisiana.

Q. You don't know whether there will be interruptible gas available from Panhandle at that time either, do you? A. I think we will take next year when it gets here. I know right now that we think there is interruptible gas available on Panhandle's system, and we think that they are legally required to sell to us, and we are going to make every effort to get it.

Q. That is the question I asked you before, whether

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or not your proposal is limited to the time prior to the commencement of deliveries by American-Louisiana? A. I said it was not.

Q. It extends beyond the time when American-Louisiana comes into being? A. It will continue until such time occurs in which somebody declares that there is no gas available on Panhandle's system, or that there is no interruptible rate under which it can be obtained. That is when our efforts will conclude, not until then.

Q. And it will not depend to any extent upon the availability of other interruptible gas to Michigan Consolidated. A. I don't think so.

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Q. I have asked you to assume the availability so that we are now talking, if I understand your testimony correctly, solely about the rate. That would be the determining factor, is that correct?

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The allocation of American-Louisiana's gas was expressly reserved by the Federal Power Commission, and will be the subject of further hearings. The form of rate on the American-Louisiana project was expressly reserved in the condition in the certificate, and American-Louisiana must submit

a satisfactory rate before it commences operation.

We could go on here and speculate indefinitely.

Presiding Examiner: The objection is overruled.

However, there should be a limit to this line of questions. It has been nearly reached, in the Examiner's opinion.

Mr. Shibley: Yes, your Honor. I think that is true. I do want to establish, though, for the record, whether or not this insistence upon Panhandle gas to the exclusion of American-Louisiana gas — assuming that quantities are available from American-Louisiana—is based solely on the rate question and nothing else.

Mr. Shannon: There is no evidence in the record, Mr. Examiner, to support that statement. The witness has made it clear there is no exclusion of American-Louisiana gas or Panhandle, or vice versa.

Presiding Examiner: Counsel's statement is not testimony.

Read the question, Mr. Reporter.

(Question read)

A. To conclude this conversation, I think I can say once and for all that we are going to continue our efforts to obtain gas from Panhandle as long as we have the legal right to do so. In so far as American-Louisiana, if it has interruptible gas available and when a rate is finally established, we will answer that question when we get there.

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Mr. Shibley: That doesn't answer my question at all, your Honor.

The Witness: That is the only way I am going to answer it at this time.

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Mr. Shannon: Mr. Examiner, the I-1 schedule doesn't impose any obligation on the purchaser or make material why the purchaser wants to buy the gas. The schedule says that whenever a seller—meaning Panhandle—has gas available, excess gas, it shall offer such gas to its buyers; and those who control storage get 20 percent. It shall offer the balance to its other buyers on the basis of their willingness to contract.

This witness has testified on direct that Michigan Consolidated is desirous of purchasing up to 100 million a day under the I-1 schedule; that Michigan Consolidated is willing and prepared to sign a service agreement to purchase that gas under the I-1 schedule in the form prescribed in the effective tariff of Panhandle.

It doesn't make a bit of difference why Michigan Consolidated wants to do it. That is not material under his schedule. All we are doing here now is speculating.

Panhandle cannot excuse a direct violation of its obligations under the I-1 schedule, regardless of what motives the customer in buying the gas may have. That is all we are talking about here. Panhandle is openly flaunting the I-1 schedule.

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They are not going to pay any attention to it. Instead of offering it, they are criticizing us because we are requesting what the schedule demands that they do.

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Karl E. Schmidt

By Mr. Shibley:

Q. Are you the person charged with the responsibility for making budget estimates with respect to the sale of gas by Michigan Consolidated Gas Company? A. I am.

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Q. What rate have you postulated in making such estimates? A. The rate which was assumed for the firm supplies was 39.5 cents.

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Q. Michigan Consolidated is making no request for any

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additional firm gas other than that 127,000 Mcf. Is that correct? A. Not at this time we are not.

Q. Will Michigan Consolidated continue to purchase firm gas from Panhandle after the commencement of American-Louisiana's deliveries? A. It will.

Q. Is Michigan Consolidated willing to enter into a contract with Panhandle for firm deliveries of 127,000 Mcf?

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A. It is.

By Mr. Shibley:

Q. For what term? A. Supposing you make me the offer.

Mr. Shannon: I might say, Mr. Examiner, as this other record shows, we have signed a service agreement covering the purchase of 127 million cubic feet per day under the LS-1

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schedule in the form prescribed in the tariff and sent it to Panhandle. All they have to do is sign it. I think you will find it in your company files.

Mr. Shibley: Now, may I have an answer to this question?

(8433)

Mr. Shannon: I might say that covers a period of twenty years, as I understand it.

Mr. Shibley: The document Mr. Shannon is talking about, so that the record will be clear, is about two or three years old. I believe it was signed in 1953. It was pursuant to the mandate of the Michigan Public Service Commission directing Michigan Consolidated to reopen negotiations; and the way they reopened negotiations was to drop in the mail a copy of the LS-1 rate schedule.

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Q. For what term would Michigan Consolidated be willing to purchase gas from Panhandle under the LS-1 rate schedule in the amount of 127,000 Mcf per day? A. We would be willing to purchase the 127,000 Mcf per

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day in accordance with the service agreement approved by this Commission, the term of which I believe is twenty years.

Q. I have just one further question on that rate schedule. Are you talking about the existing LS-1 rate schedule of Panhandle? A. I am. I believe there is only one.

Q. Well, there has been a proposed revision. I don't want to ask you any questions about it. I don't believe we are going to have it in this case, but I just wondered if your answer was directed towards the existing LS-1 rate schedule. A. I an referring to the LS-1 schedule presently in effect.

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Q. Mr. Schmidt, is Michigan Consolidated purchasing gas from Panhandle at the present time on any basis other than the LS-1 rate schedule? A. We are.

Q. Under what rate schedule are you purchasing gas? A. Under a temporary arrangement commencing September 15 through December 1, of 1955, we are purchasing an amount which will total 6 billion cubic feet under your S-1 schedule.

Q. By temporary arrangement, you mean that that service will terminate on December 1. Is that correct? A. The offer which Panhandle made to us for the purchase of that volume under the S-1 schedule terminated on December 1.

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Q. And you will not purchase any gas under that rate schedule after December 1. Is that correct? A. We haven't been offered any, Mr. Shibley.

Q. I am asking you about present arrangements. Is it your understanding that under the present arrangement you will receive no gas under the S-1 rate schedule after December 1? A. That is my understanding of the agreement that was executed by Michigan Consolidated.

Q. But you are not presently planning any S-1 purchases from Panhandle, let's say, on December 2? A. Not under the present agreement.

Q. When did the service under this S-1 rate schedule commence? A. I think it was September 16, 1955.

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By Mr. Shibley:

Q. Mr. Schmidt, on how many days during the year can Michigan Consolidated conveniently take 100,000 Mcf per day from Panhandle in addition to its other receipts of gas under the I-1 rate schedule? A. Somewhat over 300.

Presiding Examiner: 300 what?

The Witness: Days.

Mr. Flax: May I have that question read? I think there was some misplaced phrase in there.

Presiding Examiner: Read the question, Mr. Reporter.

(Question read)

Mr. Flax: May I ask if that question shouldn't have been turned around so as to say how many days it could take 100,000 Mcf per day under the I-1 rate schedule, in addition to its other takes of gas?

Mr. Shibley: That is the question I am asking, Mr. Mr. Flax, yes.

Mr. Flax: I wasn't quite sure whether the wording would leave that impression. That is your understanding when you

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answered that?

The Witness: It was.

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Q. During what period of the year did those 300 days fall? A. The 300 days are purely a guess, but I would exclude from 365 days perhaps the Saturdays and Sundays of June, July and August, principally.

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Q. Is the basis for your statement that any customers you have taken on in the last two weeks are not customers appearing on Exhibit 237, the mere fact that you are not selling interruptible industrial loads at the present time? A. I don't know if I understand you exactly, Mr. Shibley. None of the customers which we may have added in the last two weeks would be any of these appearing on Exhibit 237, I wouldn't think.

Q. I am asking you the basis for that statement. You said you didn't know the names of the customers that you

may have added in the last two weeks. A. My basis for answering the question as I did, as I read down the list of these 25 customers, it appears to me that

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we are serving all of them at the present time under one of our other rate schedules. They are existing customers. I wouldn't consider them to be new within the last two weeks for additional service.

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Q. Mr. Schmidt, will you state whether Michigan Consolidated is interested solely in purchasing gas from Panhandle under the I-1 rate schedule and the LS-1 rate schedule to the exclusion of the S-1 rate schedule?

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A. The company's position with respect to your question is that excess gas which Panhandle has on its system must legally be offered under the I-1 schedule, and because of that, it should be offered to Michigan Consolidated for sale under that schedule. We are interested in purchasing up to 100 million cubic feet a day under the I-1 schedule because we think it is the only legal one in which it can be offered to us.

In addition to that; we are interested, as I indicated before, in the continuation of purchases from Panhandle under the LS-1 Schedule in an amount of 127,000 Mcf per day.

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Q. Mr. Schmidt, would Michigan Consolidated Gas Company be willing to purchase the full amount of gas Pan-

handle seeks to export to Canada? A. Under the I schedule, it would.

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Q. Mr. Schmidt, will you state what the price of I schedule gas is? A. The I-1 schedule calls for a price of 26.3 cents per Mcf.

Q. What is the price of gas under the LS-1 schedule? A. I don't recall exactly at the moment without referring to the schedule.

Q. The reason that you have testified that Michigan Consolidated does not want more firm gas is not because of a difference in price. Is that correct? A. I think I indicated before we would be willing to enter into a contract with Panhandle for the present quantity of firm gas that we are purchasing.

Q. Mr. Schmidt, I was asking you about amounts in

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addition to the amount of firm gas. A. I think I also answered that earlier when I stated at this time we were interested only in the continuation of our present quantity.

Q. I am not asking you anything about that. What I am asking you is why you would not want to purchase this gas in addition to the 127,000 under the LS-1 schedule. I am trying to determine whether it is because of a price consideration. Is it?

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A. The price certainly is one of the considerations. I am not prepared to speak in behalf of my company at this time without having an offer which I could consult with them on, beyond the scope of my testimony, which was to the effect that we are willing to enter into a service agree-

ment with Panhandle for up to 100 million cubic feet of gas a day under their I-1 schedule; and we would be further willing to enter into a contract for a continuation of our present firm gas purchases from Panhandle.

Beyond that, I am not in a position to negotiate on behalf of my company here in this hearing room.

By Mr. Shibley:

Q. Of course there is no question of negotiation, Mr. Schmidt. I am not offering any gas. I am trying to find out why you were insisting upon having Panhandle sell gas to you under the I schedule rather than under the LS-1 schedule. Will you state what the reasons are that you would prefer to buy the gas under the I schedule than under the LS-1 schedule?

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A. I think I just answered that.

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Q. Perhaps you know this without looking at the LS-1 schedule, but does the LS-1 schedule have a take or pay for provision? A. Yes, it does.

Q. The price of gas under the LS-1 schedule is virtually the same as gas under the I-1 schedule, both being 26 and a minor fraction cents per Mcf. Is that correct? A. When taken under a 100 percent load factor under LS-1.

Q. Mr. Schmidt, is the absence of a take or pay for provision in the I-1 rate schedule one of the attractive features to Michigan Consolidated?

Mr. Shannon: I think we are back to the same thing,

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Mr. Examiner. I am going to object on the grounds of repetition and the fact you have already ruled. We have

got to keep this preliminary cross-examination within reasonable compass.

Mr. Shibley: He hasn't answered the question, your Honor.

Presiding Examiner: Objection overruled.

A. The fact of the matter is that the present I schedule does not call for a take or pay for provision. We haven't considered it in any other light than what the terms of the I schedule call for.

I couldn't answer it under any other premise.

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Q. At transcript 8278, you testified that Exhibit No. 237 shows a portion of the additional interruptible sales available to Michigan Consolidated in its Detroit district which could be made with the volumes of gas which Panhandle is proposing to sell to the Union Gas Company of Canada.

Do you recall that testimony? A. I do.

Q. Will you state what the balance of those additional interruptible sales are in terms of volume?

Mr. Shannon: I think I will object, Mr. Examiner, on the grounds it is immaterial and irrelevant.

Presiding Examiner: Objection overruled.

A. I don't know.

Presiding Examiner: Read the answer, Mr. Reporter.

(Answer read)

By Mr. Shibley:

Q. They are the only ones you do know of as potential interruptible customers, is that correct? A. I didn't say that, Mr. Shibley. You asked me what the total potential additional interruptible market was to Michigan Consolidated, the answer to which was "I don't know."

I do know in fact that this market does exist.

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Q. Do you know of any other potential interruptible customers of Michigan Consolidated Gas Company? A. I just got through answering that, I don't know.

Q. You don't know of any other? A. I said I don't know what the total potential is.

Q. We passed that question. You didn't know the answer to it.

Now I am asking you: Do you know of any others? A. At this moment, no.

Q. The only ones you know are the ones that are on Exhibit 237, is that correct? A. At this moment that is correct.

Mr. John McGrath: May I have that answer, please, Mr. Examiner.

Presiding Examiner: Read the answer.

(Answer read)

By Mr. Shibley:

Q. Just to button things up, then, so far as your testimony is concerned, on 8278, this Exhibit 237 shows the additional interruptible sales, not merely a portion of them so far as you know. Is that correct?

The Witness: Could I have the question?

Presiding Examiner: Read the question.

(Question read)

A. I don't think that is quite an accurate summarization

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because I also testified that the volume of gas shown on Exhibit 237 was in addition to that which is proposed to be sold when gas becomes available from American-Louisiana under an eight month firm, eight month off-peak, four month interrruptible basis. So it is in addition to that.

Q. Eliminating from our consideration the gas which you associate with the American-Louisiana project—that is, the industries with which you associate the American-Louisiana project—is there any other portion of the interruptible potential that you have not discussed? A. I don't know that there is or is not.

Q. Turning to Exhibit No. 237, will you state what the present state of negotiations is with Scott Paper Company which is listed as Item 22?

Mr. Shannon: I object. There has been no testimony that there have been any negotiations with Scott Paper Company.

Mr. Shibley: Let me ask that question. I think that is probably a well-founded objection, your Honor.

By Mr. Shibley:

Q. Have there been any discussions with Scott Paper Company? A. There have been discussions, yes.

Q. Have there been negotiations with Scott Paper Company? A. Not to my knowledge.

Q. Scott Paper Company has not offered to purchase any gas on any basis from Michigan Consolidated, is that correct? A. We haven't been in a position to offer them any.

Q. That wasn't the question I asked. The question I am trying to find out is whether they offered to buy any gas? A. Not to my knowledge.

Q. Is that statement true with respect to each of the potential customers shown, on Exhibit 237? A. No, that is not true of all of the customers shown on Exhibit 237.

Q. We may have to take them one by one. A. Maybe.

Q. How about the Infant Diaper Service, Item 13? A. I don't know that Infant Diaper Service has requested interruptible gas service from us.

I can shorten this thing up, if you will let me answer the question.

At various times throughout the period under which I gas has been restricted as far as the sale by our company is concerned, Cadillac, Chrysler, Board of Water Commissioners, Detroit Steel, Herman Keefer, Hudson Motors, Kelsey Hayes, Motor Products, Packard, Parke, Davis, Ternstedt and U. S. Rubber have approached us in an attempt to obtain interruptible service from the company.

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Q. They are existing customers of Michigan Consolidated on a firm basis, is that correct? A. They purchase gas on a firm basis from us, yes.

Q. And they would like to get a little better price provision in the purchase of gas, is that correct? A. The gas which they purchase from us at the present time under the firm rate is a service in addition to what they propose to purchase under the interruptible rate.

Q. At what price will Chrysler Corporation at its plant at 1,229 East Jefferson Street purchase natural gas from Michigan Consolidated on an interruptible basis? A. We feel that we can obtain all of the sales indicated on Exhibit 237 at a rate of at least 35 cents.

Q. You don't know at what price they are willing to purchase it, then, is that correct? A. It is my opinion that we could obtain them all at a rate of 35 cents.

Q. Upon what is that based? A. Our experience over the past 15 years, when at certain times interruptible gas has been available for sale.

Q. I am glad you brought that up. What has Michigan Consolidated's experience been in selling gas for 35 cents? A. We had interruptible rates—that is Michigan Consolidated I am referring to—in existence in the early forties up until such time as the War Production Board became

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effective and discontinued such sales.

Q. That was ten or twelve years ago. A. Probably just a little longer than that.

Presiding Examiner: I don't think the witness had finished his answer, Mr. Shibley. Had you finished your answer?

The Witness: I don't think I had quite finished.

By Mr. Shibley:

Q. Excuse me. A. Subsequent to that time, after the war was over, we then instituted what is presently called our rate No. 7, which is an interruptible form of rate, the first sale of which was made, I believe, in 1949, shortly after the completion of the Michigan-Wisconsin pipeline.

Because of the capacity of Michigan-Wisconsin being sold out as rapidly as it was, the addition of more Rate 7 sales of course had been curtailed and we have been under one form of curtailment or another since March 1950.

Q. Mr. Schmidt, what experience has Michigan Consolidated had in selling interruptible gas at 35 cents? A. I don't know if I quite understand the import of your question. Do you mean how much gas have we sold at 35 cents in the past? What do you mean?

Q. All right, how much gas have you sold at 35 cents in the past? A. At exactly 35 cents, I don't think we have ever

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sold any.

Q. At what price have you sold interruptible gas in the past? A. I am trying to recall what our interruptible rate was in existence in the early forties. It was less than 35 cents, the exact level of which I don't recall. The rate which is presently effective in Michigan Consolidated averages approximately 42 cents, as I recall.

Q. Are you selling gas at 42 cents to any of the companies shown on Exhibit 237?

The Witness: May I have the question?

Presiding Examiner: Read the question.

(Question read)

A. At the moment, Mr. Shibley, we are not selling Rate 7 gas to anybody. But when it was available, one of the 25 customers listed on Exhibit 237 did purchase gas from us under our Rate 7 rate.

By Mr. Shibley:

Q. Is that Motor Products Corporation? A. No, sir, No. 12, the Hudson Motor Car Company.

Q. Just to be sure that the record shows what the 42 cents is, that is the price at which the Michigan Public Service Commission would permit you to sell interruptible gas if you were permitted to sell it at all. Is that correct? A. Our Rate No. 7 is an approved rate by the Michigan

Public Service Commission, and when the gas is available for sale, the average revenue received was 42 cents.

Q. In other words, it starts at 80 cents for the first 50,000— A. No. It starts at 50 cents per Mcf less ten percent, and it goes down to 45 cents per Mcf, less ten percent. The net rate at the lowest step is 40½ cents.

Q. Is it your understanding that Michigan Consolidated would have to make a rate filing to decrease its rate in order to implement sales to the 25 companies shown on Exhibit 237 at a 35 cent rate? A. We would have to file a rate schedule before we would be permitted to sell gas under an interruptible schedule at 35 cents, yes, that is correct.

Q. That would be a new experience for your company, filing a rate decrease without an order to do so, would it not?

Mr. Shannon: I object to that. In the first place, it doesn't involve a rate decrease. It involves the institution of another service.

Mr. Shibley: Your Honor, the witness testified that he was going to reduce it from 42 cents to 35 cents, and he agreed with me it would require a filing.

The Witness: I didn't say I was going to reduce our present rate from 42 cents to 35 cents. I said we would have to make a filing with the Michigan Commission for a rate, an

interruptible rate, which would permit us to sell this type of service at 35 cents.

Mr. Shibley: I am sorry, I misunderstood your testimony.

By Mr. Shibley:

Q. What is the difference between this type of service and the service you would render at 42 cents if you were permitted to do so? A. Of course we have not made that filing with the Michigan Commission yet and haven't worked out the details as to the form of rate. But fundamentally, the difference would be because of the type of service under which this gas would be purchased by us from Panhandle, we would undoubtedly ask for a shorter term of interruption than we presently have in our rate number 7 industrial rate.

Q. By the term of interruption, are you referring to the notice which must be given to the customer before you cut him off the line? A. That is correct.

Q. And the term that is associated with the 42 cent price is 24 hours, is that correct? A. No. Under the present rate No. 7, as approved by the Michigan Commission, the period of interruption is upon 30-days' notice, except in cases of emergency such as a pipeline break or some other unforeseen emergency.

Q. Does Michigan Consolidated have any customers who

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are desirous of buying gas under your Rate 7? A. Oh, we have a lot of them.

Q. Are any of those on Exhibit 237? A. No, except the one I previously mentioned which presently has a contract with us under Rate No. 7 for different service.

Q. But some of those potential customers to which you just referred that would like to buy the gas under Rate 7 are considered part of your market in the American-Louisiana case, is that correct? A. That is correct.

Q. Have you approached, or has any one under your supervision and direction approached any of those customers to see whether they would be willing to buy the gas at 35 cents at a little shorter period of notice of interruption? A. Not to my knowledge.

We haven't progressed that far in obtaining the interruptible gas we are seeking, to enter into very much negotiation or discussion.

Q. You have been trying for five years and you don't even know who your customers will be. Take Fairmount Foods, for example. Who in your organization has talked to Fairmount Foods, Inc.? A. I don't know whether I could tell you the individual's name except that I know that he is an industrial representative.

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that made this particular survey under my supervision and direction.

Q. What did you instruct him to do? A. I asked him to go out there to discuss with them the possibility of converting his present equipment to gas in the event that it were made available to him at or about 35 cents, and to determine what his fuel requirements would be in terms of gas load under an interruptible service.

That was the extent of it.

Q. But you did not have your employee ask him whether he wanted any gas, is that correct? A. Obviously I don't know verbatim what each one of these fellows said when they got out to these different customers. If I were a salesman, I certainly would somewhere in my conversation find out if they were interested. Obviously they must have been interested because they were willing to give us the information to bring down here in order to seek this gas that we are trying to get.

Q. That is the only thing you are basing your conclusion that they would take this I schedule gas at 35 cents on, that they gave you the information? A. Oh, no, I mentioned earlier this afternoon, that a given number of these customers that I read off have sought this service from us in the past.

Q. Did any of the people to whom your employees went

and asked these questions give them information, but such companies are not shown on this exhibit? That wasn't very articulate, but do you understand the question? A. No.

Q. The question is whether your employees went to see any other customers to get the same kind of information, potential customers, besides these 25 companies listed on Exhibit 237? A. For the purposes of this type of sale, I don't think so. As I said before, I don't know for sure.

Q. Who selected Fairmount Foods, Inc., as a likely place to go? A. I would assume that the industrial representative who had Fairmount Foods as one of his customers knew of the fact that they had equipment out there which would be convertible to gas, went out there with his story —as I have indicated before—and on the basis of that obtained the information appearing on this exhibit.

They weren't selected or hand-picked, as you might say. These industrial men contact our three thousand customers

all the time. As a matter of fact, our industrial representatives contact our three thousand customers at least once a year all of them—some of them once a week.

Q. Despite the fact they were not hand-picked, everyone to whom this questionnaire or information request was posed gave you the information and everyone of them appears on

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Exhibit 237, is that your testimony? A. Yes, those they we went to and sought this information from gave it to us in the manner outlined here.

Q. They are all shown on here? None of them gave you the information which you did not show? A. I don't know that for sure.

Q. If one of your representatives went to see the industrial representative of a manufacturing company in Detroit to whom you sold firm gas and asked him for information as to his boiler fuel costs, as a practical matter would or would not that person give him the information? A. Generally speaking I would say Yes.

Q. That would be true whether or not he was interested in converting his boiler load to natural gas. Isn't that correct? A. They are not all that careless about giving information away, but I think in most instances they would.

Q. What is the aggregate daily consumption in terms of Mcf of gas equivalent consumed by the companies shown on Exhibit 237? A. If I understand your question correctly it went to the daily load of the sum of these 25 customers. I don't believe I can answer that.

Q. Would you be prepared to answer that question if and when you come back for further cross-examination?

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A. I don't see how I could be any better prepared to answer that question then than I would be now because

these 25 customers may or may not use a volume of this gas coincidently with someone else. It wouldn't be, for instance, as simple as taking the sum of this and dividing it by 300 days, 200 days or 330 days. We have a diversity factor here which I would not be able to obtain any better next week than I know today.

Q. Of course you are proposing to buy the interruptible gas solely for sale to these customers or substantially these 25 customers, is that correct? A. Oh, no, I didn't say that at all. We are in a position to take what fluctuations in load there are and put the gas in storage. We have adequate storage facilities to handle the fluctuations in the load as they may occur.

Q. What would be your market for that gas after it comes out of storage? Would you sell it as boiler fuel to this Infant Diaper Service, for example? A. Oh, no, I wouldn't think so. It would depend a good deal upon our overall supply situation. If we were having a particularly cold day or a cold period, it would go into firm service during which time this gas would probably not be on our system.

If we had a cold winter period just behind us and it was necessary to replenish our storage to protect our existing

customers for a colder than normal winter succeeding the one we just had, we would put it in storage and possibly not make this gas available for interruptible sales.

We are very flexible in what we are able to use this gas for and in our ability to handle it.

Q. So that you might very well use the interruptible gas purchased from Panhandle for firm sales to domestic space heaters? A. Should they require it, yes.

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Q. Are all the proposed sales on Exhibit 237 boiler fuel sales? A. No.

Q. Is there a short way to indicate the ones which are and the ones which are not? A. Yes, I think I can do that rapidly. I will go through these numerically.

In number one, some of it is under boilers and some of the use is a processing load in cooking gelatin.

Mr. John McGrath: May I have that last part read?

Presiding Examiner: Read the answer, please.

(Answer read.)

The Witness: Number two, a portion is under boilers and the balance is for heating solution tanks in the manufacture of brass.

Number three, a major portion of that is under boilers and a portion of it is used in metal cleaning in their pickling tanks.

In number four, there is some use of this gas proposed under boilers and the balance is in drying ovens. These are paint ovens; also some large volume water heating.

In number five, principally under boilers, with some paint drying operation.

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By Mr. Shibley:

Q. How much paint drying? A. I don't have the breakdown, Mr. Shibley, as to the percent of each one of its uses. I would say that over 50 percent is probably boiler and 40 percent is paint drying. That is similarly true of number six, which is Chrysler Corporation at another location. It is paint drying and boiler use. In number seven, that is also true—still Chrysler.

Number eight, it is for the purpose of supplying power to

pumping water to the city mains of the City of Detroit.

Mr. Wirth: That would be boiler use?

The Witness: That is correct. Number nine, it is for pickling tanks and metal cleaning.

Number ten is for the purpose of supplying steam to their bake ovens—that is Fairmount Foods.

Number eleven, Herman Kiefer Hospital, for the purpose of sterilizing, steam tables, large volume water heating.

By Mr. Shibley:

Q. Just a moment, please, Mr. Schmidt. I don't want to interfere too much with this listing, which I think will be helpful. But with respect to number nine, was that for heat treatment of metals? A. No; pickling tanks—a metal cleaning process.

Q. Will you proceed? A. I think had concluded number eleven. Number twelve

is principally for under boilers, a minor use for metal cleaning. I will use the word "metal cleaning" from now on.

Q. With respect to number twelve, is that metal cleaning or metal heating? A. Cleaning.

Q. What fuel is being used for metal cleaning? A. At the present time they apparently are using steam, which of course in this instance would come from a boiler or generator of some sort.

Q. Are they using coal under the boiler? A. For this process?

Q. Yes. A. Yes, they are in the amount of 30,000 tons in 1954.

Q. How much of that was for metal cleaning? I think I said the majority of the uses were under boilers, if not all of it. I am not too sure.

Q. Do they also buy gas from Michigan Consolidated on a firm basis? A. Hudson Motor Car Company?

Q. Yes. A. Yes, they do.

Q. Where do they use that gas? A. For the heat treatment of steel. Hudson Motor Car Company—American Motors now—are doing a good deal of ordnance work at their Jefferson Avenue plant which has to do

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with the heat treatment of steel for the United States Navy, as I remember. They also use gas out there for atmosphere generation on a firm basis, in which they burn the natural gas in an atmosphere of reduced air in order to produce carbon monoxide.

Q. I didn't mean to interfere with your listing. You were down to number thirteen, Infant Diaper Service. A. Yes. You have asked me many times about Infant Diaper Service this afternoon. They propose to use the gas under a boiler in which they use steam for indirect water heating, probably sterilization of diapers.

Kelsey Hayes at McGraw, for water heating and boiler use. That is also true of number fifteen, at their Military Avenue plant.

Motor Products: They propose to use gas under their boilers for large volume water heating and a relatively small metal cleaning process.

Q. Do you know what the amount will be? A. No, I do not know the percentage breakdown of each one of these uses.

Q. Who would know that information? The man who made up this tabulation? A. I would think he would, yes. I have the uses listed here. I asked him form that. I did not ask him for the percentage breakdown of each use.

Mount Carmel Hospital is for sterilization, large volume

8531

water heating, sterilization of course being steam generated from a boiler.

Number eighteen American Motors, Nash-Kelvinator Division, for paint drying and water heating through an indirect steam process from a boiler.

Packard Motor Company, for paint drying and water heating under an indirect heater from a boiler.

Parke, Davis & Co., the pricipal use there is under a boiler with some gas to be used for some pharmaceutical processing.

Penn-Michigan Co. is principally for boiler, steam generation, with a small metal cleaning process. Scott Paper Company is principally for steam generation and some processing that they do to pulp wood.

Scotten-Dillon Tobacco Company, principally for steam generation with gas used for some process in the preparation of their chewing tobacco that they manufacture there.

Ternstedt Manufacturing Division of General Motors is for heating solution tanks, for paint drying and steam generation under boiler.

United States Rubber Company, for steam generation, 85 percent of which—I happen to have the percentage in this one—is used for the heating of their tire molds which is steam from their boilers.

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Cross-Examination (Resumed)

By Mr. Shibley:

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Do you recall testifying concerning the peak day supply and distribution of Michigan Consolidated for the year 1955-1956? A. I do.

Q. Are those figures which you gave us yesterday the figures which you believe will be applicable? A. I would first like to make a correction to the record of yesterday.

On page 8525 of the transcript I indicated that our

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estimated peak day for the winter 1955-1956 would be between 710 and 720 million cubic feet. I added certain figures up in my head and made an error in my mental arithmetic.

In checking with the office, I find that our estimated peak day for the winter 1955-1956 will be 818 million cubic feet instead of the figure which I gave last night.

The sources of supply to Michigan Consolidated on that day will be 127,000 Mcf from Panhandle Eastern, 511,000 from Michigan-Wisconsin, and 180,000 Mcf from our Six Lakes storage.

I further obtained the estimated peak day for the winter of 1956-1957 that you requested.

Q. Will you please give us those figures, Mr. Schmidt? A. Yes, sir. The estimated peak day for Michigan Consolidated in the winter of 1956-1957 will be 1,005,000 Mcf, and the sources of supply are expected to be 127,000 Mcf from Panhandle Eastern, 498,000 Mcf from Michigan-Wisconsin, 180,000 Mcf from Six Lakes Storage, and 200,000 Mcf from American Louisiana Pipe Line Company.

I believe that answers the questions that you asked me yesterday afternoon.

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Q. In preparing that tabulation, is my understanding correct that you assumed that the sales would be made on an interruptible basis at 35 cents per Mcf to the companies shown on Exhibit 237? A. That is correct.

Q. Upon what did you base your determination of the 35 cent rate? A. Based upon the equivalent cost of gas compared to what these customers were presently paying for coal, which is indicated in column 5 of Exhibit 237, it was our judgment that gas could be sold on an interruptible basis to these customers at 35 cents.

Q. In the opinion of Michigan Consolidated Gas Company, is the criterion which you have just given us—namely, the equivalent cost of competing fuels—a proper basis for a determination of a rate?

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The Witness: I didn't understand the first part.

Presiding Examiner: Read the question, Mr. Reporter.

(Question read.)

A. For this type of service, yes, we think so.

By Mr. Shibley:

Q. Mr. Schmidt, if Michigan Consolidated were to purchase interruptible gas for sale to the companies shown on Exhibit 237, would that gas physically go directly to the plants of the companies shown on that exhibit? A. I would doubt that, Mr. Shibley. In view of the sources of supply to the Detroit district, it would be commingled with the gas being received by the Detroit district on any one day.

Q. At the time you are serving the manufacturing companies shown on Exhibit 237, will Panhandle gas be flowing into storage fields owned or controlled by Michigan Consolidated? A. If the sum of the firm gas deliveries by Panhandle to Michigan Consolidated, plus the gas to be received on an interruptible basis, were in excess of the send-out of the Detroit district, gas would flow to the storage fields.

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Q. How large a line would be necessary to move the gas from your mains into the United States Rubber Company? A. You are talking in terms of service?

Q. Yes, that's correct. A. I haven't made that calculation, Mr. Shibley, but my guess would be that a six-inch service would be adequate, because of its location.

Q. What would you anticipate that the daily delivery of interruptible gas to that customer would be? A. You asked me a similar question yesterday, Mr.

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Shibley. I wasn't able to answer what their pattern of service would be.

Q. I asked you an annual question yesterday. I have come down to days now. A. I think the question yesterday also revolved around daily deliveries to 25 customers. I will give you what the average day delivery might be expected to be. A little over 12 million a day.

Presiding Examiner: Cubic feet?

The Witness: Yes, sir.

By Mr. Shibley:

Q. Is that the result of dividing 4,439,000 by 300? A. I happened to divide by 365. If I were to divide that by 300, that would be 14.8 million cubic feet per day.

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Q. Is McLouth Steel Corporation "an existing customer" of Michigan Consolidated Gas Company?

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A. It is, a substantial one.

Q. It purchases, does it not, some firm gas? A. Quite a good deal of it.

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By Mr. Shibley:

Q. Mr. Schmidt, do you recall testifying that the sale of 15½ billion cubic feet a year would result in additional net revenues to Michigan Consolidated of 1,348,500

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annually, which would result in savings to domestic customers of about $3 per year? I believe that appears at transcript 8290 and 8291. A. Yes.

Q. You neglected to take into account, didn't you, the fact that Michigan Consolidated pays income taxes? A. This is net before taxes.

Q. But the $3 per year savings to the customers doesn't take into consideration any income taxes either, does it? A. No. It is merely the division of $1,348,500 by 453,000 customers.

Q. The federal tax rate is about 52 percent, is that correct? A. You are getting out of my field, Mr. Shibley.

Q. Let me ask you this: Do you think you can determine the ultimate dollar effect upon the customer without taking into consideration the fact that Michigan Consolidated is going to have to pay taxes on this net income so that it will not be able for any benefits to customers, that portion of it? A. I don't know too much about corporate income tax rates, but to choose an easy figure, if we were to assume a rate of 50 percent, this figure would be half as much.

Presiding Examiner: Read the answer, Mr. Reporter. I didn't get it.

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(Answer read)

By Mr. Shibley:

Q. If we were to assume a consolidated income tax rate of 54 percent and a five percent state income tax rate,

the answer would be 4/10 as much, is that correct? A. I will agree with your arithmetic without acknowledging either one of the rates which you mentioned.

Q. You don't know what the tax rates are? A. That is true.

Q. You stated Michigan Consolidated serves approximately 453,000 domestic customers. You spread your assumed savings over that amount. Isn't that correct? A. That is what was done to arrive at the $3 figure, as indicated on transcript 8291, yes, sir.

Q. Do you recall testifying a couple of weeks ago that Michigan Consolidated serves approximately 790,000 customers in the State of Michigan? A. They do.

Q. Do either of those figures include the 138,000 additional customers which you will have upon the completion of American-Louisiana? A. I don't know what the 138,000 stands for.

Q. Maybe I had better take that step by step. A. If you would, please.

Q. Are there 138,000 potential domestic space heating

customers who have applications on file with your company for commencement of service of firm gas? A. Yes.

Q. Does the 790,000 customer figure include those 138,000 customers? A. I see what you are driving at. The manner in which we classify our accounts is such that when a residential customer who uses purely residential service becomes a residential space heating customer, he is transferred from the residential classification to the residential heating classification.

The 453,000 indicated on transcript 8291 is for the residential user only, now classified as a residential customer. The 138,000 applications which you have mentioned are from this 453,000 customers, and if they all are attached on our lines, the 138,000 would be subtracted from 453,000

and become residential heating customers in accordance with our classification of accounts.

Q. Does that mean that after the 138,000 customers are hooked up, that you would be able to spread this after-tax portion of the $1,348,500 over only about 300,000 customers, rather than 453,000 customers? A. Yes. If it were done in that manner, it would be spread over 315,000. In other words, if our space heating saturation theoretically were 100 percent, there would be

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no residential customers as such in our classification.

Q. So if you hooked all of them but one up, you would have a saving of $1,348,000 per residential space heating customers, is that correct? A. He would be very well off.

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By Mr. John McGrath:

Q. The last column in Exhibit 237, does that represent their total needs, or does that reflect curtailment?

The Witness: Would you repeat the question?

Presiding Examiner: Read the question.

(Question read)

A. The last column in Exhibit 237 is the conversion

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of the actual 1954 use in tons by these customers to an equivalent Mcf of gas based upon equal efficiencies of the two fuels.

By Mr. John McGrath:

Q. What Btu did you use for gas? A. 1,000.

Q. Do you have any figures showing the estimated amount of natural gas that will be delivered to these com-

panies on an annual basis? A. Are you referring to a potential delivery on an interruptible basis?

Q. I assume that this is the type of service you intend to perform.

Are you going to meet all of their requirements on an interruptible rate? A. If the gas is available to us, Mr. McGrath, and the equivalent gas consumption would happen to be for any one customer in any one year something greater than what their equivalent coal use was in 1954, we would propose to serve them that volume for this use.

Q. You don't anticipate then, any curtailment of these customers once you get them on the line, is that it? A. Oh, I didn't say that. Curtailment of service, if interruptible gas becomes available to us, is predicated upon the deliveries of that gas by Panhandle Eastern and the status

of the supplies of the overall system. There could very well be curtailment.

Q. You don't have any showing of estimated curtailments of these customers so we can compare how much gas they may use and how much standby fuel they may use? A. No, I do not.

Q. It is my understanding then that their curtailment would be subject to Panhandle's deliveries. If Panhandle stops delivering you this gas, then you stop delivering gas to these customers. Is that it? A. That is partially true. It is dependent, I would think, upon the status of the overall gas supply on the system as to whether we would be able to continue service on an interruptible basis or not. I am thinking in terms of the possibility of a given summer period, for instance, in which the preceding winter had been unduly warm.

Were that the case, the company might consider continuing service for a period of time, even though Panhandle

were not to deliver us the gas for a period of time. I can't say that now. We have no plan in mind as to the continuity of service. That would have to be looked at at the time that it arose.

Q. You wouldn't take American's-Louisiana's 39 cent gas and put it in storage and then take it out of storage and sell it to these people at 35 cents, would you? A. I didn't say that.

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Q. How much do you pay for Michigan-Wisconsin gas? A. Our present rate from Michigan-Wisconsin is 32.98 cents per Mcf.

Q. Do you have any figures estimating the cost to put gas in storage and take it out—how much of an increase it is over your purchased price of the gas? A. No, sir.

Q. You do not have, then, any estimate as to the cost to these customers to use a dual fuel for boiler fuel purposes. That is, since they would be subject to interruption of natural gas, they have to have standby.

You don't have any figures to tell us what their estimated annual cost would be using the two fuels? A. No, I do not, Mr. McGrath.

Q. Would you be able to get that for us? A. No, I don't think I could.

Q. Haven't those companies made any studies themselves to determine whether or not it would be economical for them to purchase 35 cent natural gas? A. I don't know that they have, other than the customers that I mentioned yesterday in the record who have asked us from time to time as to the availability of interruptible gas.

Q. At 35 cents? A. Yes.

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Q. So presumably then they have made some study that would show that their cost would warrant their purchasing,

35 cent gas for the uses that you showed yesterday? A. That may be entirely possible, yes.

Q. Won't you be able to obtain that information from them before the time you return for cross? A. No, I don't think so.

Q. Why not?

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The Witness: I can't commit these companies as to what information they may supply me or not. You might better get that from the companies directly. I can't on the record say here that I can or can not get that information.

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Q. You have to get an O.K. on this rate from the Michigan Public Service Commission. Would it be your thought, knowing how the Commission feels on these things, that if they allowed the service, it would be available to anybody on your system, not strictly those in the Detroit area? A. It certainly would be available on a non-discriminatory basis.

Q. In other words, the cost to get the gas to other parts of your system wouldn't make the 35 cent price too low? A. I don't know that. No study has been made in that regard.

Mr. John McGrath: I believe that is all the information I need at this time, Mr. Examiner.

Presiding Examiner: Staff counsel?

By Mr. Flax:

Q. Mr. Schmidt, you mentioned the possibility of storing this gas or a portion of this gas. I refer to the 100,000 Mcf that you are seeking under the I rate schedule.

Would your primary plan be to store this gas or to sell it on an interruptible basis? A. Primarily to sell it on an interruptible basis.

Q. Any gas you could not sell on an interruptible basis you would then put into storage, is that correct? A. If it were available to us, yes, that is correct.

Q. If Panhandle had 100,000 Mcf and you only on a particular day found a market for 50,000, then you are saying you would put the other 50,000 in storage? A. That would be our plan at this time, yes.

Q. But the purchase of this gas on an interruptible basis would not be part of your regular storage program, would it? A. No, because of the lack of assurance of continuity of supply, we would not consider it part of our firm source of supply, nor would we plan our system operations on that basis.

Q. If you had a circumstance, however, in which the prior winter was a particularly cold winter and your storage fields were down, and the same time for some reason you had not been able to fill your storage fields to their desired capacity or to the desired level, in that case would you use this interruptible gas to fill your storage fields in preference to selling it to interruptible customers? A. Your assumption presumes, as I understand it, that the preceding winter that you are referring to is one in which we may have possibly gone into what we consider

our cushion gas to protect the system from a colder than normal heating season. And presuming that is your assumption—

Presiding Examiner: Is that right, Mr. Flax?

Mr. Flax: Yes, sir.

The Witness: Presuming that is your assumption, it would be my idea at least that we would store the gas, if made available by Panhandle to replenish the cushion taken out the preceding winter before we sold it to the inter-

ruptible customers, because it would in effect protect our firm customers.

By Mr. Flax:

Q. But that would be more or less unusual circumstances when you would go into your cushion gas, is that right? A. I think it would be relatively unusual for that to occur, yes, sir.

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Q. With regard to that, you mentioned on week-ends. Would the reason you couldn't sell it on week-ends be that your industrial plants would be closed down? A. Yes. The pattern of service to our industrial plants is such where their operations are reduced on week-ends.

Q. Of course that would be during the summer. Is that correct? Or would that also be during the winter? A. No, that would be in the summer months. I think I further went on to indicate that it might constitute the week-ends in June, July and August which, if I remember my testimony, amounted to some 24 days perhaps.

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Q. Then there is no great advantage to the interruptible sale from the standpoint of giving you the opportunity to make up for quick shifts in temperature, for quick demands for the gas on your system? A. Not for quick changes in temperature when you talk in terms of hours in the day, that is true.

Q. You mentioned the fact that there would be no extra cost in connection with these sales. Will there not be additional billing costs and meter-reading costs in connection with the interruptible sales which you show? A. I think I said, Mr. Flax, that the additional costs to serve the cus-

tomers on Exhibit 237 would be negligible. There would be small additional billing costs. It doesn't take any longer to read two meters than it does one meter, and our meter readers are in these plants once a month anyhow.

So I certainly think that would be a negligible increase, even though there were a minute increase in the time it took to read both meters.

These customers are on our distribution system, and as I also indicated, other than very minor betterments of supply which are a normal part of our construction each year, no betterments would be necessary to supply these.

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So I think that the word "negligible" is probably better to use than the words "no additional costs."

Q. Have you specifically examined the adequacy of the supply mains to each of these customers shown on Exhibit 237? A. Yes, we have.

Q. And it was from that examination that you determined the adequacy of your supply mains, is that correct? A. Yes, sir.

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Q. In describing the uses to which each of these customers on Exhibit 237 would put the gas that would be made available to them by this interruptible sale of gas, you mentioned in some instances that it would be boiler fuel and then you mentioned several other uses, such as paint drying.

In the case of paint drying, is that a direct application of paint drying, or is that a steam heating of a room in which paint on an automobile or some other fixture is dried? A. I think in most instances it is the introduction of steam or hot air into the walls of an oven wherein the paint is dried by means of radiation from the walls of the oven.

Q. So in some of those paint drying operations, what would be involved would be a boiler fuel use, and the steam being used for the paint drying? A. That would be possible, and probable.

Q. There were several other uses you mentioned. One was metal cleaning. From the standpoint of metal cleaning, is that also a use of steam for the metal cleaning? A. Not in all instances, but it is in a great number of them. Metal cleaning is most often done by means of heating a solution into which the metal is introduced

in order to remove scale or other foreign products from the surface of the metal before it is processed.

That could be direct firing and it could be done by indirect means.

Q. When you referred to boiler use in these particular plants, do any of the plants have electric generators and the steam would be used for their electric generation? A. I could tell you in just a moment, Mr. Flax.

There is some electric generation shown for customer No. 5—that is the Chrysler Jefferson plant. Customer No. 12, Hudson Motor Division of the American Motors Corporation.

That is all of the 25.

Q. In any of these instances do you know if the steam use would be used for heating—that is, space heating of the plants? A. I think in certainly the larger plants indicated on Exhibit 237, that the central boiler plant of these companies is of such capacity where at least some of the buildings on the plant property would be receiving steam for space heating use, incidental to the other uses for which the boiler was being fired.

Q. With respect to the American Agricultural Chemical Company, you mentioned some of the heat would be used

in the processing load in cooking gelatine. Is that in steam kettles? A. Yes.

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Q. Have each of these customers shown on Exhibit 237 indicated that they would retain their coal piles and their coal-burning equipment as standby? A. None of the customers have indicated to us that they would either retain or discontinue their coal piles, but if they were to receive interruptible service from us, they would of necessity have to retain some sort of standby fuel.

Mr. Flax: That is all I have of Mr. Schmidt.

Presiding Examiner: Does any other counsel have any cross-examination of the witness at this stage?

Mr. Hunt: I have one or two questions.

Presiding Examiner: Mr. Hunt.

By Mr. Hunt:

Q. Mr. Schmidt, you testified, did you not, that Michigan Consolidated stands ready and willing and desires to purchase this so-called excess gas pursuant to the I-1 schedule of Panhandle? A. I did.

Q. When was the determination made by Michigan Consolidated that it so desires to purchase this gas? A. Exhibit 229 in this proceeding indicates in a letter from Mr. Tuttle to Mr. Buddrus—then president of Panhandle Eastern Pipe Line Company, that we desire to purchase the volume now being sought as early as June 20, 1951.

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Q. Would you state for the record why Michigan Consolidated did not put on its case in support of this request for gas at the time called for by the Examiner, by the direct cases of intervenors, namely, after the conclusion of the 7(a) and direct?

Presiding Examiner: It seems to me, Mr. Hunt, that

is a question of law, not for this witness to say. It is a question for decision by his counsel.

Mr. Hunt: Mr. Examiner, I would like to have this record reflect a statement of somebody in this organization giving at least the articulate reasons for this performance. I am perfectly willing to accept Mr. Shannon's statement, assuming he speaks for Michigan Consolidated.

Mr. Shannon: I heard the request. I don't think I am required to explain to counsel how or why we conduct our case the way we do.

As far as I am concerned, I don't care what he thinks of our procedure.

Mr. Hunt: Your Honor, I think that this record should reflect the reason why Michigan Consolidated came in here, and with the euphemistic appelation of rebuttal evidence—it seems it was a mystery throughout the rest of the proceeding whether Michigan Consolidated wanted more gas or didn't want more gas. It turns out now that they do want more gas, that they have wanted it since 1951, the witness testified, and

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there are exhibits to that effect.

If that is the case, I submit that the order of the Commission and your request was broad enough to bring Michigan Consolidated within the purview of that request. It seems woefully untimely for them to come in now and put it on in this way, and delay and drag on these proceedings in the manner that they have.

I would like to know why they consider that this request for gas, this desire for our gas shouldn't come in with the rest of the intervenors when we were told if we had requests for more gas, that there was a certain time that we should come in with those requests.

Otherwise presumably we should hold our peace.

Presiding Examiner: The question is ruled out. It is manifestly beyond the province of this witness to answer your question one way or the other.

Mr. Shannon: If we are going to get into a matter of procedure, there are a few questions I would like to ask counsel as to why he appears here at this belated time to stooge for Panhandle Eastern Pipe Line Company at this stage of the game, when he hasn't been here all along. We made our position clear the opening day. All he is exhibiting is his lack of knowledge of this record.

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By Mr. Ackerman:

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Q. I think that the other question had to do with the level of the storage cushion at a given time. I believe that Mr. Flax asked whether you would use I schedule gas to replenish your cushion if that had been depleted because of an extraordinarily cold winter. Do you recall that question? A. Yes, I do.

Q. Am I correct in believing that you said Yes, in answer to that question, but that you thought that it would be rather unusual for something like that to happen? A. Yes.

Q. Have there been any instances within your recollection in which your storage cushion has been depleted? A. Yes.

Q. How often has that happened in the last five years? A. If you add one more year to five, that is when it happened. It was the winter of 1949-1950, and to a degree the succeeding winter. So that would be the fifth and

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year, inclusive.

Q. Was this before Michigan Wisconsin pipeline gas became available? A. Immediately after the completion of Michigan-Wisconsin, and during the time that they were getting up to their capacity to deliver their total pipeline capacity.

Q. But it hasn't happened since they have developed their total pipeline capacity? A. It has not.

Q. Mr. Schmidt, does Michigan Wisconsin sell any interruptible gas to your knowledge? A. Michigan Wisconsin has no interruptible rate schedule.

Q. Has Michigan Consolidated ever explored with Michigan Wisconsin the possibility of obtaining interruptible gas? A. I don't know that. I certainly have not.

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J. E. Spindle

was recalled as a witness, having been previously sworn, was examined and testified further as follows:

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Cross-Examination

By Mr. Shibley:

Q. Mr. Spindle, do you have the working papers with you from which you derived your estimate of the 90 wells and the costs and the geological formation of the Howell field? A. Yes, sir.

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Q. Do you have core analyses and logs and all of that material to the extent that you relied upon it? A. I have the initial tests of Michigan Public Service Commission, the scout tickets taken at the time of drilling. I have no core analyses. There is a cross section of the logs of the wells as described just to show the elevation.

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By Mr. Flax:

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Q. Do you know whether the Howell field is presently attached or can be easily attached to Panhandle's interstate pipeline system? A. It is attached at this time.

Q. Do you know whether there need by any additional looping of the line by which the Howell field is attached to Panhandle's system?

Mr. Shibley: In order to do what?

Mr. Flax: In order to operate this Howell field in conjunction with Panhandle's interstate pipeline operations.

A. That depends entirely on the amount of use that is made of it. At the present time it could be used with present connections on a limited basis, but not up to the maximum that I have described here.

By Mr. Flax:

Q. To what degree could it be used at this time, do you know? A. To the limit of the existing wells.

Q. What would that limit be? A. In quantity?

Q. In quantity. A. No I haven't figured that.

Q. With respect to the wells that you had planned

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to suggest that Panhandle drill,, would any of those wells be within the City of Howell? A. It wouldn't be practical to drill them within the city limits of Howell.

Q. Would you by reasonable spacing be able to get the number of wells in this area that you have determined that was necessary and still avoid drilling within the City of Howell? A. I think that could be done, yes, sir.

Q. Have you made any spacing patterns or other studies as to where you could put the wells and whether you could

put them? A. No, sir. Our number of wells was based entirely on the average open flow of the existing wells, and from that, the requirement of other wells to reach the maximum capacity of 18 billion 400 million we have talked about.

Q. Mr. Spindle, would you recommend that the management of Michigan Consolidated spend $9,000,000 in the development of the Howell field as a storage field, on the basis of the studies which you have so far made? A. If we owned it, I would, yes, sir.

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Karl E. Schmidt

was recalled as a witness, . . .

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By Mr. Shibley:

Q. Mr. Schmidt, what is the Btu value of the natural gas distributed by Michigan Consolidated Gas Company? A. It will average approximately 980 Btu.

Q. Is that the approximate average Btu of the gas which Michigan Consolidated purchases from Michigan-Wisconsin? A. And including Panhandle. It is the average of the two.

Q. What I really wanted to know is the average of the Michigan-Wisconsin Btu. A. Michigan-Wisconsin gas runs about 975 Btu per cubic foot.

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Q. Yes, that is correct. But you have anticipated as I believe the record shows, that you will receive 200,000 Mcf per day from American-Louisiana on every day during the year, is that correct? A. We hope to.

Q. Will there be any change under your expectations in the 46 million Mcf to be purchased from Panhandle and the 66 million Mcf to be purchased from Michigan-Wisconsin after the commencement of American-Louisiana? A. No.

Q. So that in order to determine the percentage figure which I have asked for, at least under your present expectations, we would simply multiply 365 or 366 times the 200,000 Mcf per day, and that would be the volume of American-Louisiana gas which Michigan Consolidated would hope to purchase? A. Yes. As a matter of fact, that would amount to 73 billion cubic feet annually, which when added to the 112 we formerly explained, would give a total of 185 billion, and using that as a dividend, you can compute the percentages of the three sources.

Presiding Examiner: Mr. Schmidt, does the 46 billion cubic feet purchased from Panhandle include the present purchases under the S-1 schedule?

The Witness: They do not.

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By Mr. Shibley:

Q. Is that because you don't anticipate purchasing any gas under the storage schedule from Panhandle? A. It is because we have an agreement which terminates on December 1, 1955. I know nothing of what would take place subsequent to that.

Q. Who determines the amount of gas that Michigan Consolidated shall receive from Michigan-Wisconsin? You stated it was 46 million Mcf per year. How was that determined? Is that the contract demand figure in the tariff? A. The 46 billion cubic feet you refer to is the obligation of Panhandle to deliver gas to Michigan Consolidated under orders of this Commission on the basis of 2 million a day to Ann Arbor and 125 million per day to Detroit.

Presiding Examiner: 125 million what, Mr. Witness?
The Witness: Cubic feet.

By Mr. Shibley:

Q. But with respect to Michigan Wisconsin, how do you compute your figure of 66 million Mcf? A. It is our opinion that of Michigan-Wisconsin's capacity, that we are entitled to approximately two-thirds of that volume. The matter which was determined by an allocation proceeding in 1952—early in 1952 as I recall—and we expect to continue to purchase that volume of gas which

is approximately what we have been purchasing from them.

Q. Do they determine how much they are going to sell you, or does Michigan Consolidated determine how much it is going to buy from Michigan-Wisconsin or does the American Natural Gas Service Company or somebody tell you how much to buy? A. No, we can determine that for ourselves.

Q. So that Michigan Consolidated tells Michigan-Wisconsin how much gas it will take from Michigan-Wisconsin? A. That's correct.

Q. Do you make that determination yourself? A. It is done in my department, yes.

Q. Do you know what the average cost of purchased gas to Michigan Consolidated will be upon commencement of American-Louisiana deliveries, making the assumption that we made before, that American-Louisiana's rate will be 39½ cents? A. No, I haven't made the computation. It is very simple to do, however.

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By Mr. Shibley:

Q. You have testified that Michigan Consolidated has had experience in selling interruptible industrial gas, is that correct? A. Yes. We went through that last week.

Q. Did Michigan Public Service Commission permit

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Michigan Consolidated to sell that gas to industry at a rate lower than your average gas purchase cost? A. I certainly can't answer what the Michigan Public Service Commission does, or will do.

Q. Of course that wasn't my question. I asked whether they did permit Michigan Consolidated to make a sale of interruptible industrial gas at a rate lower than the average gas purchase cost? A. Under the two interruptible schedules we have had in the last 15 years, I would say No.

Q. In addition to those two types of industrial rate schedules that you have had—and those are the firm rate schedule and the rate 7 rate schedule—is that correct?

Presiding Examiner: Read the question.

(Question read)

A. I would appreciate it if you would reword your question, because I don't think your question is correct. I think you are confused.

By Mr. Shibley:

Q. I hadn't finished. I was at a stopping-off point. What are the conditions of service under the two rate

schedules or forms of rate schedule to which you have just testified? A. The two interruptible rate schedules which I just got through testifying about, one of which was some 15 years

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ago and is no longer effective, was purely an interruptible rate schedule under a short term interruption provision. And as I testified last week, I don't remember exactly what the rate under that schedule was.

The other interruptible schedule, which is presently effective, is the one which you designated as our Rate No. 7 schedule, which is still in effect.

Presiding Examiner: You have already testified to those terms, have you not?

The Witness: I testified as to the terms, yes, I have.

By Mr. Shibley:

Q. Just to put this all in one place, in addition to the rate 7 rate schedule, you also sell gas under a firm rate schedule to industry, correct? A. We do.

Q. And you propose to sell gas under two new types of industrial interruptible rate schedules, namely this 8 month-4 month, and the six hours' notice rate schedules, is that correct? A. I would like to answer that this way: We propose at an appropriate time to supersede our existing rate No. 7 schedule and apply to the Michigan Commission to alter that schedule to become 8 month firm and 4 month interruptible, and in addition to that, if we are successful in obtaining interruptible gas from Panhandle, we would propose to file a

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rate schedule for purely interruptible gas on a short term interruption with the Michigan Commission at about 35 cents per Mcf.

Q. 42 cents is the present rate under your Rate 7 rate schedule, and as you intend to make the conditions of service applicable to that sort of sale more firm than they presently are, Michigan Consolidated would be warranted in charging a higher rate than the 42 cents, is that correct? A. That is possibly true. I would like to correct your figure of 42 cents, however. 42 cents is approximately what the company is earning on the sale of Rate No. 7 gas when it is available for sale. As I testified last week, the low step in the rate is 40.5 cents. It is a step rate.

Q. It averages 42 cents. Is that approximately correct? A. Yes, sir.

Q. So the answer to my question was that that 42 cents average would be subject to increase when you make the gas more firm and sell it under the 8 month- 4 month provision? A. That is possible, but I certainly am not in a position to answer the level of the rate that we may apply for at such time as we do apply, at this time.

Q. Will you give us the unit cost of Michigan Consolidated's operating expenses, including overhead, depreciation, and federal income taxes?

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A. I can't do that. I don't know.

Q. Do you recall that when Michigan Consolidated's rates were being fixed in—I believe you call it—the Mt. Pleasant area, that Michigan Consolidated stated that the unit cost was 64 cents per Mcf? A. I don't recall that, Mr. Shibley. I wasn't a party in that case.

Q. Does that sound like a reasonable figure to you? A. I am unable to judge whether it is reasonable or unreasonable. I just don't know.

Q. That is not part of the function of your department—is that correct—to evaluate costs or expenses in relation to the sale of gas? A. That is not in my department, that is correct.

Q. Whose department is that? A. The matter of the company records is in the hands of the comptroller.

Q. When you make studies of the feasibility of extending service to new industries, or to new areas, is it not one of the considerations that you have to evaluate? A. In any studies that we might make as to extending to a specific industry, I don't use the unit cost of operation, maintenance, depreciation and taxes, no.

Q. You use the competitive fuel cost criterion? A. That is our general approach, yes.

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Q. On June 1, 1954, you testified in that proceeding, did you not, as follows:

"The storage program of Michigan Consolidated, which has to be planned for some years in advance, will be seriously jeopardized if we are required to continue the storage of gas at our present rate, and are not permitted to sell this 25.1 billion cubic feet of gas on an interruptible basis. Michigan Consolidated proposes to purchase from American-Louisiana Pipe Line Company approximately 200 million cubic feet of gas a day on a 100 percent load factor beginning on January 1, 1956. The purchase of gas in this manner results in the most favorable rate. Once this new gas supply is assured, the company plans to begin adding heating

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customers next summer as fast as they can be connected to our lines. While this heating load is being built up, the company will have excess volumes of gas available

which must be placed in storage in the Six Lakes field. Under the storage program which must be followed, the company will purchase some 48 billion cubic feet of gas for storage in the Six Lakes field during the first two years of operation of American-Louisiana Pipe Line.

"As has been stated, the Six Lakes Field has a working storage of approximately 53 billion cubic feet.

"As of the present time, we have accumulated approximately 2 billion cubic feet of gas above base pressure in this field, and as I stated previously, we will continue to store gas in the field as a result of the Commission's order of October 19, 1953, unless the weather is cooler than normal. If we built up the storage in the Six Lakes field to any appreciable volume above the base pressure prior to receipt of American-Louisiana gas, we will be unable to buy the gas supply from that pipeline which will be available to us at 100 percent load factor.

"The result will be the purchase of gas at a less favorable load factor and consequently at a higher

rate. The actual fact is, we do not have the capacity in Six Lakes field for the storage of this 5 billion cubic feet of gas if we are to carry out a plan of operation which we consider to be the most economical and feasible in the development of our market after the receipt of gas from American-Louisiana."

Is that your testimony? A. I think you read from the transcript of the proceedings, so it is.

Mr. Shannon: It was, in that case.

The Witness: That is April, 1954.

By Mr. Shibley:

Q. Once again in 1955, you had available to you large quantities of excess gas from Michigan-Wisconsin. Is that not correct?

The Witness: Could I have the question read back?

Presiding Examiner: Read the question.

(Question read)

A. No, that isn't correct. We had available to us some gas of Michigan-Wisconsin in the early part of 1955, just succeeding the heating season, but I don't want to give the impression that that was a large and continuing quantity.

By Mr. Shibley:

Q. Perhaps we can determine how large it was. Michigan

Consolidated didn't purchase that excess gas from Michigan-Wisconsin, did it? A. No.

Q. Instead, Michigan Consolidated entered into a storage agreement, did you not, whereby your company stored Michigan-Wisconsin's excess gas in Michigan Consolidated's Six Lakes field.

Isn't that correct? A. We entered into such an agreement, yes.

Mr. Shibley: Your Honor, I wonder if I might have marked for identification a four page agreement dated May 2, 1955, and signed by Michigan-Wisconsin Pipe Line Company by Frank W. Thompson, Vice President, and on behalf of Michigan Consolidated Gas Company by H. Tuttle, President.

Presiding Examiner: Exhibit 247 for identification.

(The document above referred to was marked as Exhibit No. 247, for identification)

By Mr. Shibley:

Q. Mr. Schmidt, do you have a copy of Exhibit 247 before you? A. I do.

Q. Is that a true, accurate and correct copy of the agreement under which gas was stored by Michigan Consolidated for Michigan-Wisconsin to which you have previously testified? A. Yes, I think it is.

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Q. What volume of gas was stored by Michigan Consolidated for Michigan-Wisconsin pursuant to the provisions of this agreement? A. 7.6 billion.

Presiding Examiner: What?

The Witness: Cubic feet.

By Mr. Shibley:

Q. Is that amount still contained in Six Lakes storage field as a part of the 15.9 million Mcf of gas which you have testified is presently there above base pressure? A. Yes, as a part of the 15.9.

Q. Mr. Schmidt, when the weather is such that Michigan-Wisconsin has gas available over and above the needs of heating and other firm customers, is Michigan Consolidated entitled to purchase its share of this gas for service to interruptible industrial customers?

Mr. Shannon: I think I will object, Mr. Examiner. The word "entitled"—entitled under what? Outstanding orders of the Michigan Commission, or the tariff of Michigan-Wisconsin? I think the question would have to be clarified and narrowed down. Otherwise we will have confusion in the record.

Presiding Examiner: Will you reframe your question, Mr. Shibley, to make it more definite?

Mr. Shibley: Your Honor, this man certainly ought to

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know whether they are entitled or not.

Presiding Examiner: What you mean is entitled in any way, is that right?

Mr. Shibley: That's correct.

Presiding Examiner: Objection overruled.

A. If Michigan-Wisconsin has excess gas on its system generated because of a winter preceding the period being warmer than normal, if that gas is made available to all of its utility customers, certainly we feel we are entitled to being offered a portion of it.

By Mr. Shibley:

Q. You are aware, are you not, of the amendment to Michigan-Wisconsin's tariff which is now contained in Section 8.2 of the tariff, providing that Michigan-Wisconsin's purchasers may buy excess volumes of gas which are available from time to time? A. Yes, I just said so.

Q. But I wanted to tie it into the tariff.

Mr. Shibley: Your Honor, it may be out of an abundance of caution, but I request the Examiner and the Commission to take official notice of its order entered July 31, 1952, in the matter of Michigan Wisconsin Pipe Line Company, permitting the amendment to Michigan-Wisconsin's tariff to take effect, which made provision for this excess gas schedule.

Presiding Examiner: All right.

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By Mr. Shibley:

Q. Mr. Schmidt, will you please state the volume of gas purchased by Michigan Consolidated under that excess gas provision of the Michigan-Wisconsin tariff during the past summer? A. I don't know.

Q. Now I am confused. Why don't you know how much gas you purchased from Michigan-Wisconsin during, let's make it specific—May, June, July and August, under the excess gas provisions of the tariff? A. During the months

you have reference to, it is coincident with the agreement which you have identified as Exhibit 247, and the temporary excess gas which Michigan-Wisconsin had available on its system was stored in our Six Lakes field for use this coming winter period for additional heating customers which have been approved to be added to the Michigan-Wisconsin system.

Q. The answer is, then, because of the features you just mentioned, you did not purchase gas during those months under the excess provisions of the schedule, is that correct? A. I would say that that is generally correct.

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Q. Will you state why it is that Michigan Consolidated, upon receipt of American-Louisiana gas, intends to sell a portion of that gas to industry under this eight month firm, four month interruptible service instead of selling it to residential space heating customers? A. When American-Louisiana gas becomes available to Michigan Consolidated in an amount of 200 million cubic feet per day, which we anticipate now to be in the fall of 1956, we expect prior to that time to make gas heating available to all of the customers of Michigan Consolidated on an unrestricted basis.

As a matter of fact, we are in the process of leading up to that at the present time.

It isn't a matter of not offering this gas which we propose to sell on an eight month off peak, four month interruptible basis to residential consumers. We are. We are only anticipating that this gas which is available to industry for this period of time is the gas which will be left over after the needs of all of the customers of Michigan Consolidated will be satisfied to the degree to which they

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want to come on our lines.

As the load increases on the overall system, the Michigan Consolidated system, and the firm requirements of our residential and commercial and residential space heating customers require it, it would be that volume of gas from which they would be supplied down the road.

Q. Why do you not intend to store that gas for this period of time down the road, when you may need it? By this gas, I am referring to the eight month, four month industrial gas? A. It is just financially impractical.

Q. How far down the road are you looking? A. In G-2306 we looked for three years beyond the initial date of service. I think the record in 2306 will speak for itself, in which it shows that by that time the requirements and supply of the system balance each other and subsequent to that there has to be some giving on the part of lesser uses to those of higher uses.

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Q. Mr. Schmidt, being as interested as you are in obtaining additional quantities of gas, have you had occasion to investigate the possibility which was suggested at the hearing three or four days ago, concerning the availability of gas from Tennessee Gas Transmission Corporation? A. No, I have not.

Q. Are you still maintaining your position that you have never heard of any proposal by Tennessee Gas Transmission Corporation to bring gas down from the Canadian border through its Wisconsin-Michigan area? A. There was an article in our local paper on Sunday about it, as I remember. That is all I do know about it, however.

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Q. That was the advantage to which you were referring, that Panhandle wouldn't cut Michigan Consolidated off and leave this three or four hundred Mcf per day load on to the Bridgeport Brass Company, is that correct? A. My answer was meant to be a little broader than that. I, of course, assumed that I schedule gas would be made

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available to all of the customer companies of Panhandle Eastern, and of those that would purchase I schedule gas under those conditions, when such a time would arrive in which curtailment would become necessary, that it would be done on an equitable and non-discriminatory basis. I had no one customer in mind in answering that question.

Q. My question was: In your many efforts which you have outlined to obtain I schedule gas, have you run across any of these so-called other customers of Panhandle who are also attempting to purchase I schedule gas? A. I personally have not, other than Citizens Gas.

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By Mr. Ackerman:

Q. Mr. Schmidt, Exhibit 237 shows a market for interruptible gas which totals 20,838,000 Mcf on an annual basis. It is my understanding that Michigan Consolidated is asking for a condition to be attached to Panhandle's certificate in this proceeding which will require Panhandle to make available to it 100,000 Mcf per day under the I Schedule. Is that correct? A. We feel that Panhandle is obligated to offer excess gas to Michigan Consolidated under its I Schedule, and that we are willing to purchase up to 100 million cubic feet of that type of gas from Panhandle.

Q. Per day? A. Per day.

Q. Is there a discrepancy on an annual basis between the market you have shown for interruptible gas and the amount you have expressed a willingness to purchase from Panhandle? A. I don't think so.

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Q. If you took 100 million cubic feet of gas per day over a period of a year, what would the total take be under the I Schedule from Panhandle? A. If one were to multiply 100,000 Mcf by 365, the product would be 36,500,000 Mcf. That is simply the multiplication of two numbers.

Q. There is, is there not, a difference of 16 million Mcf between that and the market figure that you have shown on Exhibit 237? A. The arithmetical difference is 16 million Mcf.

Q. What would happen to that 16 million Mcf of gas that we are now speaking of over the course of a year? A. Mr. Ackerman, I am not proposing to be a witness for Panhandle Eastern by a long shot, but I wouldn't expect under the normal operation of a pipeline system that one could assume interruptible gas to be available at a 100 percent load factor—which you imply by means of the two numbers which you gave me to multiply together.

If Panhandle Eastern were to enter into an I Schedule arrangement with Michigan Consolidated, and the volume of gas made available to Michigan Consolidated would be in excess of 20.8 billion feet, we would explore the market to determine what would be done with the excess.

There is no provision in the I Schedule as I interpret it for Panhandle to offer us 100 million cubic feet of gas a day

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times 365.

Q. In other words, do I understand you correctly to say that Michigan Consolidated at this point and on the basis

of its presentation in Exhibit No. 237 would be satisfied with interruptible gas on an annual basis totaling 20,838,000 Mcf? A. Our request, Mr. Ackerman, is on the basis of 100 million cubic feet of interruptible gas per day for the number of days it would be available to us. It isn't tied in to any specific annual volume.

Q. That is what I was getting at. In your direct testimony I believe that you stated you expected to sell this interruptible gas at a price of 35 cents per Mcf. Is that correct? A. I said that it was my judgment that the volume of gas indicated on 237 could be sold at a rate of 35 cents per Mcf.

Q. Can you tell us what you think the maximum price would be at which this gas could be sold to these potential interruptible customers and displace the coal that they are using? A. I haven't explored the question of maximums, Mr. Ackerman. On the basis of the equivalent cost indicated on 237, it is my opinion that the gas could be sold for 35 cents. Whether that could be 36 cents or 35.5 cents or 37 cents, I have made no study; nor have I a basis for saying that it will

be 37 cents or 36 cents. It is my opinion that it will be 35, maybe more. I don't know.

Presiding Examiner: The price of 35 cents would be near the maximum, would it not, in your opinion?

The Witness: It would be somewhere in that neighborhood, yes, sir.

By Mr. Ackerman:

Q. I believe you testified that you could obtain at least a 15 percent premium over the equivalent price of coal for this interruptible gas. Is that correct? A. I did.

Q. Could you tell us just what that belief is based on? A. I think I explained that very thoroughly in my testimony.

Q. You are referring to your testimony about the question of transporting the coal from wherever it was being stored to the place where it was being burned? Is that the line of testimony you were referring to? A. I also testified to several other factors beyond that, and also to the fact that the figure shown on Exhibit 237 as the cost per Mcf being the cost laid down at the bin—not at the point of utilization. Taking all of the other tangible advantages, it is my judgment that 15 percent over the figure you see on Exhibit 237 is a reasonable increment over

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this figure at which the gas can be sold.

Q. What I was trying to get at, Mr. Schmidt, is whether the 15 percent was based solely on your judgment, taking these factors into account; or on actual experience in the past. A. We have found it also to be true in actual experience at the period of time in which our rate 7 gas became effective. And I also testified to that, I believe.

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By Mr. John McGrath:

Q. Mr. Schmidt, you already have 237 before you. I direct your attention to customer No. 4, which is the Cadillac Motor Car Company located on Clark Street. Can you tell us what type of equipment they are presently using to fire their boilers with coal? A. Pulverized coal equipment.

Q. When was that equipment installed? A. I don't know.

Q. Was it new when it was installed? A. I don't know.

Q. What did it cost? A. I don't know that.

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Q. Have they installed any new coal firing or handling equipment lately? A. I don't know that either.

Q. What percent of the gas used by Cadillac will be

boiler fuel? A. The volume of gas which appears on Exhibit 237 is all boiler fuel. You must understand, however, that Cadillac is also a firm gas customer of the company.

Q. That's right. I have reference only to the quantities set forth on Exhibit 237—"Annual Consumption in MCF." A. Yes.

Q. At present, this use set forth for Cadillac is all being taken care of with coal. Is that right? A. That is my understanding, Mr. McGrath, yes.

Q. Will coal be retained as a standby? A. I can't answer that for sure.

Q. You don't know? A. I would assume, however, that there would be some standby fuel. It might well be coal.

Q. Do you know whether or not conversion will require the installation of dual burners—conversion to natural gas? A. The boilers at the Cadillac Motor Company are equipped to burn gas now. They formerly were an interruptible customer of the company.

Q. How long ago was it they used natural gas?

A. I don't recall the date of the discontinuance. It was at such a time when we were no longer able to offer the service; but I don't recall the date.

Mr. Shibley: May I ask a question there, Mr. McGrath?

Mr. John McGrath: Yes, sir.

Mr. Shibley: Are you testifying with respect to this plant of Cadillac Motors shown on Exhibit 237, or are you testifying as to Cadillac Motors generally?

The Witness: I am talking about Clark Street.

Mr. John McGrath: I so understood it to be specifically restricted to Clark Street. If you intend to deviate, kindly let we know because I am going to cover a couple of others.

The Witness: I will do that.

By Mr. John McGrath:

Q. Do you know whether or not, as a result of their using coal for some time, it will be necessary to change the baffling in the boilers? A. No, I don't know that.

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Q. Mr. Schmidt, getting back to Exhibit 237, I believe just before the recess I directed your attention to Customer No. 5, which is the Chrysler Corporation on Jefferson Street.

Do you know what type of equipment they have that fires boilers with coal in that plant? A. No, I do not.

Q. Do you know whether or not they have installed any new coal firing or handling equipment lately? A. No.

Q. Do you have the percentages of gas that will be used for boiler fuel in that plant? A. Yes. The proposed load at Chrysler's Jefferson plant consists of firing five boilers totalling 11,200 horsepower, the steam from which is used 20 percent for electric generation, 40 percent for oven heating in a paint drying operation, and 40 percent for general plant use.

Q. Is that the same as the Jefferson Kercheval plant?

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A. They are across the street from one another, Mr. McGrath.

Q. Which plant did you have in mind at the time? A. Chrysler's Jefferson plant is located on Jefferson Avenue and extends from Jefferson Avenue north to a street that runs between Jefferson and Kercheval Avenue. The general plant area I might explain includes what is known as the Kercheval plant and the Jefferson plant. The addresses are different, but the general plant area is the same.

Q. Where do you propose to sell this gas to the so-called Jefferson plant or the Jefferson-Kercheval plant? A. I

am not too certain, Mr. McGrath, that the boiler facilities may not supply both operations. That is entirely possible.

Q. You stated there were only five. Do you have any information that would contemplate installing any new equipment? A. No, I do not.

Q. Do you know whether it is stoker-fired or not? A. I assume it is, Mr. McGrath.

Q. Why do you assume that? A. Simply from the size of the boilers. It doesn't seem to me it would be reasonable to hand-fire them.

Q. You don't know of your own personal knowledge? A. No, I do not.

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Q. You don't know whether they have five boilers or seven boilers? A. The information obtained at the time of the survey at this location indicates that there are five boilers, two 3500 horsepower boilers; three 1400 horsepower boilers.

Q. When did you obtain that information? A. It was early in the month of August, 1955.

Q. Will coal be retained as a standby, do you know? A. I don't know that it will be. I would have to assume that under the same assumption that I indicated for the Cadillac Motor Company.

Q. I don't want the assumptions, necessarily. A. I don't know what Chrysler will do.

Q. Will the conversion, to your knowledge, require installation of dual burners? A. It will require the installation of at least gas burners, yes.

Q. With stokers, is it ordinarily necessary to make several changes in the combustion chamber to change from gas to coal, or vice versa? A. That is true in some instances, yes.

Q. Have you taken that into consideration when you set forth your conversion cost? A. Yes. The conversion cost

covers the cost of burners, whatever boiler plant changes are necessary, fuel

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line, service and meter manifold.

Q. Is that as a result of your survey? A. That's the result of our survey, correct.

Q. Did you make it personally? A. I did not. It was made under my supervision and direction.

Q. Are you a boiler engineer—combustion engineer? A. I received a Masters Degree in heating and ventilating.

Q. I don't imagine that— A. I don't know whether that qualifies me as a boiler engineer or not.

Q. Does it qualify you as a combustion engineer? A. I think in a way it does.

Q. Do you know how many of these units in the Chrysler plant will necessitate changes in the combustion chamber? A. No.

Q. Do you know whether it will necessitate changing the baffling? A. No.

Q. Now let's go to the next Chrysler Corporation plant, which is No. 6 on Mack Street.

What type of equipment do they have at the present time to fire coal under its boilers?

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A. Stoker-fired equipment to fire three 750 and one 1,000 horsepower boiler.

Q. Where did you get this information? A. From the survey made under my supervision and direction.

Q. Mr. Schmidt, we are running into the same problem that we ran into when Mr. Shibley was questioning you.

I would like to have information you have as a result of your personal knowledge. When you don't have that, will you kindly indicate that to your personal knowledge, you do not have any information on that? A. I indicated

at the outset of my testimony concerning Exhibit 237 that I personally did not visit these plants at the time of this survey, but that the survey was conducted under my supervision and direction, which is quite normal.

It is done all the time.

Q. That may be normal, but it is also quite normal that when people want a supply of gas, they send in a witness to testify as to their needs. A. I would like to explain concerning the Chrysler Corporation—

Presiding Examiner: Wait a minute—the witness hasn't finished, Mr. McGrath.

Mr. John McGrath: There is no question pending, Mr.

Examiner.

Presiding Examiner: There is a statement by counsel which takes the place of a question. You may proceed to complete your statement, Mr. Witness.

Do you want it read as far as you have done? Do you know where you broke off?

The Witness: I would like to explain in connection with Customer No. 6, about which I was being specifically questioned, the Chrysler Corporation recently acquired the Briggs Manufacturing Company. The location referred to is 11631 Mack Avenue and was formerly the Briggs Manufacturing Company, and the Briggs Manufacturing Company signed a contract with Michigan Consolidated for Rate 7 gas, which we have never been able to execute, since gas was not available, and that the Chrysler Corporation has indicated a desire to renew that contract when Rate 7 gas or interruptible gas did become available.

By Mr. John McGrath:

Q. Do you have anything in writing to that effect? A. I don't have it here, no. But in other proceedings before this Commission, I am sure that the contract I have made reference to is in the record.

Mr. Shibley: May I ask a question?

Mr. John McGrath: Just a moment, Mr. Shibley. Mr. Examiner, in the light of the statement that

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I made and the response I got to the statement, I don't think it was in the least bit responsive, and I move it all be stricken.

I was satisfied with the answer to the question he gave me prior to that, and he has gone beyond that.

Presiding Examiner: I grant you, Mr. McGrath, it was not responsive to the question. But certainly the statement of the witness is pertinent and the Examiner is disposed to let it stand. I don't mean pertinent in response to your question necessarily, but it is material to the issue in the case.

Mr. John McGrath: I wonder if before—

Presiding Examiner: I wish to admonish the witness to make his answers responsive to the questions.

Mr. Shibley: May I ask a question there, Mr. McGrath?

Mr. John McGrath: Yes.

Mr. Shibley: In reference to that last statement which you volunteered, Mr. Schmidt, is the rate 7 service which you testified concerning to be used under the boilers of this Chrysler Corporation plant, formerly the Briggs Manufacturing Company plant?

The Witness: The contract which was executed by Briggs Manufacturing Company did call for service under our Rate No. 7, yes.

8690

Mr. Shibley: That wasn't my question.

The Witness: I thought that that was your question. I am sorry.

Mr. Shibley: Perhaps I had better reframe it.

Was the service which Michigan Consolidated intended

to perform under the Rate 7 rate schedule to Briggs going to be used by Briggs solely for boiler fuel?

The Witness: Yes, it was proposed to be used under the boilers at the Mack location, correct.

Mr. Shibley: So that you already have a Rate 7 schedule with this plant for the same service that you now propose to render for 35 cents, is that correct?

The Witness: We have a contract which was executed by the Briggs Corporation some years ago for this service, yes.

Mr. Shibley: At 42 cents, or the average of 42 cents?

The Witness: It would be for that average.

Mr. Shibley: When you attempt to contract with Chrysler, rather than selling it to them for that 42 cent rate, you would prefer to take a lower rate at 35 cents, is that correct?

The Witness: If the gas were available to us under Panhandle's interruptible schedule, we would offer the service to the now Chrysler Corporation under either Rate No. 7 or the proposed form of rate, and let Chrysler decide which of the

two services they would prefer on the basis of the continuity of service we could provide under one schedule as compared to the other.

Mr. Shibley: Is there any other duplication here of proposed service which it is the intention of Michigan Consolidated really to render under the Rate 7 rate schedule rather than under the 35 cent, six-hour interruptible rate schedule?

The Witness: No, this is the only company which fell in that category, and it only did so because of the conditions which I have formerly described.

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8694

The following is a true copy of an excerpt from the minutes of a meeting of the Federal Power Commission held on October 5, 1955:

"The Commission considered the reference to it on September 29, 1955, by Presiding Examiner Purdue (Docket Nos. G-1705, et al., Panhandle Eastern Pipe Line Company, et al., of an appeal from said Presiding Examiner's ruling receiving evidence and testimony sought to be introduced by Michigan Consolidated Gas Company in rebuttal to the case-in-chief by Applicant Panhandle, such testimony and exhibits consisting of proposed modifications of Panhandle's LS-1 Rate Schedule and the form of rate schedule applicable to delivery by Panhandle to Michigan Consolidated. The Commission overruled the Presiding Examiner in receiving such evidence and sustained the objections to the receipt thereof."

/s/ Leon M. Fuquay
Secretary

. . . . . .

Karl E. Schmidt

8700

By Mr. John McGrath:

Q. Mr. Schmidt, you mentioned certain equipment which was installed in the Chrysler Corporation that you had no personal knowledge of. Do you know when that equipment was installed? A. No, sir.

Q. Do you know whether it was new or not when it was installed? A. No, sir.

Q. Do you know what it cost? A. No, I do not.

Q. Do you know whether they have installed any new coal-firing or handling equipment lately? A. No, I do not.

Q. At least I have got one question here, Mr. Schmidt,

you have got an answer for. What percent of the gas will be used for boiler fuel?

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A. Would you refresh my memory as to what particular customer you are referring to?

Q. We are on No. 6 at this time. A. The proposed load for customer No. 6 is all under the four boilers I previously mentioned, 30 percent of which is for paint drying operation and 70 percent for general plant use.

Q. But it is all boilers? A. Oh, yes.

Q. Will the coal be retained as standby? A. I don't know.

Q. Do you know whether to your personal knowledge they contemplate installing dual burners? A. I can only give you the results of the survey which was made under my supervision and direction.

Q. No, thank you.

Going to customer No. 19, which is the Packard Motor Division of the Studebaker-Packard Corporation, do you of your own personal knowledge know what type of equipment they are using to fire coal under their boilers? A. Again I must refer to the survey which was made under my supervision and direction.

Q. The answer to the question is No, then, is it not? A. That is correct, under the assumption.

8702

Q. Do you not know when it was installed, whether it was new or not? A. I do not.

Q. Do you know whether they have installed any new coal-firing or handling equipment lately? A. No.

Q. Mr. Schmidt, do you know whether or not that particular plant is slowly being abandoned by Packard? A. I know of no such thing.

Q. Do you know of your own knowledge what will be

necessary in the boilers in order to utilize natural gas by the Packard people? A. I can only again refer to the survey which was made under my supervision and direction.

Q. I would like to have on that a Yes or No answer to those questions, Mr. Schmidt, if possible. A. The answer is No.

Q. Therefore the answer is No on that, isn't it? A. I gave the answer as No.

Q. Do you know to your own personal knowledge whether or not coal will be retained as standby? A. No.

Mr. John McGrath: I only have a few more of these spot ones, checking, Mr. Examiner.

8703

By Mr. John McGrath:

Q. Company No. 22, which is the Scott Paper Company, and I believe that was formerly the Detroit Sulphide Pulp and Paper Company, was it not? A. Yes.

Q. Do you know to your own knowledge what type of equipment they presently have to fire coal under the boilers? A. No.

Q. I take it you don't know when it was installed or whether it was new when installed, to your own personal knowledge? A. No.

Q. Do you know whether they have installed any new coal-firing or handling equipment lately? A. No.

Q. Do you know what this plant would have to do in order to adapt itself to the use of natural gas in its boilers? A. Of my own personal knowledge—

Q. Of your own personal knowledge. A. —the answer is No.

Q. Do you have any specific knowledge as to any of these 25 customers as to your own knowledge, questions similar to what I have asked you?

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Mr. John McGrath: I will make it personal knowledge. I will stick to personal knowledge.

Mr. Shannon: He testified to that on direct, that he didn't visit these three thousand plants.

Presiding Examiner: Do you understand the question, Mr. Witness?

The Witness: Yes.

Presiding Examiner: Just limited to your personal knowledge.

The Witness: I answered the question last week, in which I indicated that I personally visited none of these plants.

Presiding Examiner: So the answer to the question is you don't have personal knowledge. Is that right?

The Witness: That is correct.

By Mr. John McGrath:

Q. I believe on questioning by Mr. Shibley you said you made many market surveys in the past. You don't have any personal knowledge of any of these plants as a result of your former employment within Michigan Consolidated? A. The answer to the question is No.

Presiding Examiner: Do you mean by No, that you do not have personal knowledge?

The Witness: That is correct.

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8705

Mr. Lee: Before you ask him a question, may I ask one question? You say you have no personal knowledge, but that this survey was made under your direction.

Could you tell us who made the survey, the personnel?

The Witness: It was made by the various representatives in the industrial division of the company, the survey

being made under my direction, which is normal practice in our company.

* * * * * * * * * *

By Mr. John McGrath:

Q. For what length of time was Michigan Consolidated competitive with coal in the large industrial boiler fuel market? A. I don't understand your question.

Q. Refreshing your memory and referring to line 11 in

8708

transcript 8280, you speak of the experience of Michigan Consolidated over many years. That is what I had in mind when I asked the question.

The Witness: Could I have the original question, please?

Presiding Examiner: Read the previous question, Mr. Reporter.

(Previous question read)

A. Michigan Consolidated has always been in competition with coal as one of the competitive fuels in its industrial market.

* * * * * * * * * *

Q. You set forth certain assumed benefits on

8707

transcript 8280 and 8281. What customers listed on Exhibit 237 did you have in mind when you listed these benefits? A. Generally all of them.

Q. Isn't it conceivable it would be cheaper in some instances to stockpile coal rather than use natural gas on an interruptible basis in so far as you know? A. If stockpiling were the only component, I would say it was conceivable.

Q. If you want to extend that to stockpiling and firing

coal, isn't it conceivable that it is possible to be cheaper? A. It is possible, yes.

Q. If a stockpile of coal were maintained as standby fuel, it would not eliminate the maintenance expense around the property that you assumed, would it?

The Witness: Could I have the question?

Presiding Examiner: Read the question.

(Question read)

By Mr. John McGrath:

Q. Again I had in mind your testimony on transcript 8280, line 24, the second and third words in that line. A. In my opinion that would be depending upon whether the stockpile was being used or not.

Q. If there is anticipated interruption, and as a

result of that anticipated interruption they maintain the stockpile, they certainly would have to have personnel and handling equipment to utilize that stockpile should it be necessary, wouldn't they? A. But they may not incur operating expenses while the equipment is not being used that you refer to.

Q. Are you assuming that these plants with their stockpile, in your answer, are not equipped with modern coal handling equipment? A. I made no assumption at all.

Q. If they are going to use coal as a standby, they must stockpile it and they must have equipment in order to use that fuel. Isn't that correct? A. Yes, if they maintain coal as their standby fuel.

Q. If they do, they would have to put in some other standby, would they, rather than coal? A. That is true.

Q. It would entail further expenses, would it not, if they were to decide that they would switch from coal to natural gas on an interruptible basis and also switch to some other

type of standby fuel? A. Yes, if you were to assume there was a third fuel involved, that certainly is true.

Q. That isn't reflected in Exhibit 237, however?

8709

A. No, it is not.

Q. On transcript 8281, is it not a fact that with modern coal-firing equipment, the smoke problem is virtually eliminated? A. I don't know that that is a fact.

Q. Do you have a smoke ordinance in Detroit, if you know? A. We sure do.

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Q. Can it be assumed, then, that there are no longer any restrictions on the part of the Michigan Public Service Commission as to the use of natural gas? A. Oh, but there are.

Q. There are? A. Yes.

Q. What do those particular restrictions pertain to? A. The existing restrictions cover two classes of service, namely, the first being the addition of space heating customers. We have been authorized to add a total of 78,000 heating customers to the company's system. When that is done, unless further orders of the Commission come forth,

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we will be restricted again.

The second is on the sale of interruptible gas by the company, wherein we presently have an authorization to sell up to 4.8 billion cubic feet of that; when that gas has been sold, we will be under a restriction again on the sale of gas under our rate schedule No. 7.

Those orders are still in existence.

Q. They are still in existence? A. Yes.

Q. Mr. Schmidt, at the present time Michigan Consolidated does not have an approved rate of 35 cents, does it? A. That is true.

Q. That has to be gotten from the Michigan Public Service Commission. Isn't that correct—the approval? A. Yes, sir.

Q. What would be the terms of that rate, as proposed by Michigan Consolidated as to notice and minimum quantities, et cetera. A. I don't know that at this time, Mr. McGrath.

Q. What would be your suggestion as vice president and engineer? A. I gave you generally what a rate of this nature might have in it in so far as general terms are concerned. One is a price at or about 35 cents per Mcf. No. 2, that we would undoubtedly request a curtailment provision upon, let

us say, six hours' notice. But other than that, I have no recommendations at this time as to the other conditions which might be included in such a rate, when it is filed.

Q. As you stated this morning, also on transcript 8503, under Panhandle's LS-1 rate, your average price is 26.1 cents per Mcf. Why haven't you sought a similar 35 cent rate from Michigan Public Service Commission in the past, since you have been able to purchase gas at 26.1 cents? A. We haven't had the gas to sell.

Q. You have been restricted under your other interruptible rates, have you not? You haven't been able to sell under your other interruptible rates recently, have you?

Is that your testimony? A. My testimony was that we are restricted from selling gas other than the quantity I mentioned under our existing interruptible rate. We have at this time only one.

Q. Yes. But the fact that you are presently purchasing

gas for 26.1 cents didn't influence you towards arriving at this proposed 35 cent rate, did it? A. It has nothing to do with it. One can't offer gas for interruptible service when the same company has such a large unsatisfied demand for space heating and other higher preferential uses and at the same time have

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a shortage of supply on its system. The 26.1 feature of the LS-1 rate has nothing to do with the subject.

Q. After you receive American-Louisiana gas will there still be space heating restrictions? A. We don't expect that there will be.

Q. Will you seek authorization of this 35 cent rate regardless of whether Panhandle makes I gas available to you? A. I can't say that at this time.

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By Mr. Shibley:

Q. Mr. Schmidt, it is a fact, is it not, that Michigan Consolidated has computed and previously testified in other proceedings that it costs 4 cents per Mcf to transport gas from the Austin field to Detroit? Is that a fact? A. Yes, I think that is true, except that I believe that is the transportation cost up and back.

Q. That distance is 20 miles further at least one way, is it not, than the distance between Detroit and Six Lakes? A. That is approximately correct, yes, sir.

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Q. When was the contact made with this Penn-Michigan Company which is shown on line 21 of Exhibit 237? A. This entire survey was made early in the month of August

1955, of which the Penn-Michigan Corporation is one of the 25 customers listed on Exhibit 237.

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J. E. Spindle

was recalled as a witness, and having been previously duly sworn, was further examined and testified as follows:

Presiding Examiner: Counsel for Panhandle Eastern, cross-examination?

Cross-Examination

By Mr. Shibley:

Q. Mr. Spindle, is the Howell Field a producing field? A. Yes, sir, it is.

Q. Which of Michigan Consolidated's and Michigan-Wisconsin's storage fields were converted from production to storage reservoirs at the time that the gas pressure in the field was as high as it presently is in Howell Field? A. None of them.

Q. Mr. Spindle, you have a bachelor of arts degree, do you not? A. Bachelor of science.

Q. Do you or don't you have a bachelor of arts degree? A. I have a bachelor of arts degree in literature.

Q. In what? A. Literature.

Q. And your bachelor of science degree is from Rose Polytechnic Institute. Is that correct?

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A. In civil engineering, yes, sir.

Q. In your testimony you covered the geology of the Howell Field. Isn't that correct? A. Yes, sir, I did.

Q. And what would be a safe pressure. Isn't that also part of your testimony? A. I stated an operating top pressure would be 1500 pounds, which is a little over 100

pounds less than the original rock pressure of the Howell Field.

Q. Can you state what would be the top base pressure? A. I stated 500 pounds would be the working base pressure.

Q. Did you give some testimony concerning deliverability questions? A. Yes, there was some information there on deliverability.

Q. Mr. Spindle, you testified, did you not, in the American-Louisiana Pipeline consolidated proceedings, Docket G-2306, et al; and I believe your testimony was given on Wednesday, June 23, 1954. Is that correct? A. I don't remember the date, Mr. Shibley, but I did testify in that case.

Q. Commencing at transcript page 2527 in that proceeding—

Presiding Examiner: Mr. Shibley, might it not be better if you showed the witness the testimony?

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Mr. Shibley: I will be happy to, your Honor. I am also going to read it into the record, but I can show it to him at the same time.

By Mr. Shibley:

Q. You were being cross-examined by Mr. Littman, counsel for Panhandle Eastern Pipeline Company, and he asked you this question, did he not: "Can you tell us specifically just what parts of this exhibit you take responsibility for and what parts Dr. Katz takes responsibility for?" He asked you that question, didn't he? A. Yes, sir.

Q. And you were testifying in that proceeding concerning the Six Lakes storage field. Isn't that correct? A. Yes, sir.

Q. Your answer to that question was, was it not: "Yes,

sir. My responsibility, Mr. Littman, is purely as you have indicated, the operation of the field, my direct knowledge of the drilling. You asked if I was a geologist. Certainly with some intelligence, I have absorbed some geology in the years of this experience.

"So I think I am able to set the actual depths that these wells were drilled when this space was encountered and therefore could make a contour map. That comes under civil engineering, incidentally, not necessarily geology.

"So I think all the things that I have testified to are

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matters which you might term the mechanical things that we have done in our operations. Dr. Katz will take care of the theoretical.

"Q. Dr. Katz will take care of what? "A. The theoretical things.

"Q. What are the theoretical things in this Exhibit 109? "A. The ones that you are arguing about, the geology, what would be a safe base pressure and what would be a top base pressure and deliverability questions.

"Q. Those will be within his responsibility and you are not undertaking to testify in regard to those matters? "A. Yes. I don't mean that they are theoretical entirely. I mean that they are calculated by formula which you might consider geology and I might not be qualified for." Is that a correct statement of your testimony? A. That is exactly the way the transcript reads and it was my testimony.

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By Mr. Flax:

Q. Mr. Spindle, how many wells would you estimate it would be necessary to construct in order to operate the Howell Field as a storage field? A. It was my testimony

last week that 90 wells would be required to operate the Howell Field for an annual input and output of 18.4 billion cubic feet under limitations of 1500 pounds maximum and 500 pounds minimum pressures.

Q. That is 90 wells additional to the 14 presently existing. Is that correct? A. Yes, sir, making a total of 102. There are 14 existing wells and 90 new ones, for a total of 104. My arithmetic was bad.

Q. What would be your well spacing for that 104 wells? A. I didn't attempt to set up a spacing. That would

depend upon the results of the drilling as the drilling progressed. The field is large enough so that a straight arithmetical calculation for 90 additional wells would be one well in approximately 80 acres.

Q. But it would be a closer spacing than that, would it not, considering that you wouldn't drill in the City of Howell? A. That is right. I would guess it would be at least half of that. It would depend entirely on the drilling program.

Mr. Flax, before you ask a question, I would like to elaborate on that a little bit. If you eliminate the City of Howell and take that same arithmetical calculation, that would still leave 1 well in 50 acres.

Q. Would that also include eliminating the sections which are south of the fault line as shown on Exhibit 239? A. As far as the spacing program, in your answer to your question, yes. There are two wells in the west half of the city which are existing, and of course they would be used as they are used now. They are in open country and not highly developed city dwelling areas of the city.

Q. Does that eliminate the space outside of 3050 contour also? A. No. I didn't limit it to that. I just took the total rough area of the heavy boundary line on the map.

Q. Would you drill outside of the 3050 contour in your

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estimation and recommenadtion? A. No, sir, I wouldn't expect to go beyond that.

Q. That would eliminate considerable more area that you would have available for drilling and development of that Howell Field as a storage field, would it not? A Roughly it looks like it would eliminate about 25 percent of the remaining area.

Q. What would be your approximate well spacing eliminating that additional area? A. I haven't made any calculation on that basis, but purely as a guess here it could get as low as one well to 20 acres. We have wells drilled on that pattern in our storage operations that work very successfully.

Q. Mr. Spindle, you have estimated the various costs related to the Howell Field and you state on transcript 8331 that the development cost per Mcf would be only 46 cents per Mcf. Could you translate the development cost and the other costs related to the development operation of the Howell Field into a figure per Mcf cost of gas that would be deliverable from storage, assuming that all the working storage would be utilized in any one year? A. I couldn't do that very readily.

Presiding Examiner: You say you could or could not?

The Witness: Could not, Mr. Examiner, unless you wanted to take a very rough figure. Your deliverability was based on

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different rates. As the pressure goes down, your deliverability rate changes. Any costs that I might give on the operation of that would be pure guesses. I have nothing to base it on.

By Mr. Flax:

Q. Why would your rates make any difference, Mr. Spindle? It is simply a matter of the amount that would

be delivered, or the volume of working storage, divided into your annual cost of operation from your storage field, making allowance for depreciation, taxes and overheads, would it not? A. I haven't given any figures on cost of operation. That was the cost of acquisition that was in the testimony.

Q. I appreciate that. I am asking you now: Do you have any figures of cost of operation? A. No, I have none at all. We haven't operated any fields at these depths—this is 3800 feet—and I have no information available anywhere. Actually there are no published figures that I know of on cost of operation.

Q. Do you conclude that this operation would be economically feasible? A. Yes, sir.

Q. How can you conclude it would be economically feasible if you have no figures on the cost of operation? A. It would be based entirely on an estimate that I would have to make on the manpower required to operate it. I would have nothing to base it on except pure judgment.

8731

Q. Are there problems of operating a storage field in the depths involved in the operation of the Howell Field that would not be present in the operation of shallower storage fields? A. There should be only the additional cost of compression because of the extra depth and the higher pressures that you would be working against. All other costs should be comparable as far as manpower that is required for operating the wells.

Q. Why couldn't you on the basis of your present experience in operating storage fields make an estimate of the cost per Mcf of such operations? A. I can, if you want to take my judgment on it.

Q. Before we go to that, how would the figure of 46 cents per Mcf as the cost of developing a storage field compare

with, let's say, the Austin Field? A. It is almost double what the Austin Field was.

Q. How about the Six Lakes Field? A. All of those Michigan storage fields run considerably less, I would say in the range of 20 to 30 cents.

Q. Getting back to your figure of the cost per Mcf operating the Howell Field, what would your estimate be? A. Based on all assumptions, understand—because we have nothing to go on other than that—if we use a crew of ten men, have two trucks, assuming they run 20,000 miles a

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year at 10 cents a mile, with other equipment in there and additional expense and the gas for fuel in the field at an estimated rate of 25 cents—I don't know what basis you would charge that cost—compressor operation at $20 a horsepower per year, dehydration plant fuel at the same rate of 25 cents, and we get a figure of $323,700, based on 18.4 billions cubic feet, and comes out at 1.76 cents per Mcf.

Those figures are purely speculative. I don't know how Panhandle would operate. I am not sure that that would be the way they would operate.

Q. You didn't have any charges for depreciation or return, did you? A. No, sir, none whatever in there.

Q. Do you have any estimates of the effect of depreciation and return on your prior estimates? A. That would have to be based on the cost.

Q. You have estimated cost, have you not? A. That is what I mean. That is different from the operating, is what I am getting at. On that other basis, I have a rough calculation here which takes taxes at 1 percent; depreciation at 3.5 percent; interest, 4.5 percent on bonds, assuming 60 percent would be bonds; and earnings of 6 percent.

I am going out of my field to give you those figures, but

in answer to your question we end up with a figure of 37.13 cents per Mcf.

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That is on the capital cost with interest, taxes, depreciation and earnings.

Q. What did you figure your 6 percent on? A. It is just taken out of the air.

Mr. Shannon: I think Mr. Flax meant what you applied it to.

The Witness: I applied it on the balance—after we have taken taxes, depreciation and interest; and then assuming a Federal tax of 52 percent, it really gets down to 48 percent of the balance.

By Mr. Flax:

Q. You have the Federal tax in your computation? A. Yes, I have Federal tax in there, too, yes, sir.

Q. And you took 6 percent on your equity? A. Yes, sir.

Q. And 3 percent on your bonds. Is that right? A. Four and a half percent on the bonds.

Mr. Shannon: May I ask him a question there, Mr. Flax? Should the 7-cent figure that you gave us be added to the 1-plus cent figure that you gave us previously?

The Witness: Yes, sir. The 7 cents is purely on acquisition and development costs with these factors that Mr. Flax speaks of, and the other is strictly an operating cost.

Mr. Shannon: The two should be added together?

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The Witness: Those two should be added together—.889.

Mr. Flax: That is all we have of Mr. Spindle, Mr. Examiner.

Mr. Tom McGrath: I have a few questions, if it is our turn. This is the first time I have asked any questions in this hearing, I think—no; I was here a year ago.

By Mr. Tom McGrath:

Q. Mr. Spindle, you gave an estimate, as I understood your testimony, that it took 90 wells to fully develop the field for storage and delivery of gas. Is that correct? A. Yes, sir.

Q. In doing so, you first arrived at a figure of well spacing for one well per every 80 acres. That was approximate. A. That is assuming the boundary that is shown on the map here, the entire area would be productive, which I say would probably not be the case.

Q. Of course, then, you eliminate the City of Howell because you assumed there would be no drilling in that particular area. Then you came down to something like one well per 50 acres. Later, under certain conditions, one well per 20 acres.

What I want to ask you is whether or not in your opinion the number of wells that you assumed is necessary for successful operation of the field, assuming that you have properly taken into

8735

consideration the perimeter of the productive areas? A. I stated last week, Mr. McGrath, that this field could be operated immediately for storage purposes; but we were talking about the full capacity of 18.4 billion per year would require the 90 additional wells, or a total of over 100.

Q. Is that because of the capacity of the wells to take gas so that you still have to have 90 wells, even though you had a 20-acre well spacing on the available area? A. Yes, sir. It is based on the present open flow capacity. As it was drilled, if you get better wells—I mean, if you get

better open flow--then you will find more porous spots in there and thicker pay and you would need less wells and therefore you may not need this total.

That is the reason I say again you would determine the total number as you progressed rather than take an arbitrary figure like I have taken here. My figure is based on the average of the existing wells.

Q. And that, from the best information you had, assumes drilling up the entire productive acreage as you have estimated to exist? A. I don't mean by that you would drill the entire area. I am talking about the volume that is indicated to hold gas as indicated by the drop in pressure curve. Nobody knows at the present time the limits of that. There have been three dry

8736

holes and two producers that stopped producing. So the only information we have on limiting this area are those five wells.

Q. You have used what might be termed the pressure drop production method of determining what the porous space is in the field? A. Yes, sir, I have used the record of the field's production to date.

Q. What I am getting at is, in your judgment, the maximum would be 90 wells, but it might be less than that. A. Yes, sir.

Q. You gave us some figures just a few moments ago and I didn't get the purport of them. But from those, are you able to tell us what the gas would cost Panhandle at the wellhead after it had been stored and reproduced? A. I have nothing on that cost. I have no idea what their gas costs are.

Q. You don't know the field price of their gas? Is that right? I thought you had that. A. No. I was under the impression that the field, when it was brought in, the wellhead price was 18 cents.

(8736)

Q. I am not talking about the Howell Field. A. I know nothing about Panhandle's operations other than that; and the Howell Field is just a record of what has been talked in the State of Michigan. That is all I am speaking of.

8737

Q. You are talking solely about the cost of converting the Howell Field to a storage field and the cost of operating it? A. That's right. That is the reason I qualified this figure of 25 cents as the cost of the fuel that would come out of there. It is pure speculation. I don't know what their costs would be.

Q. You are still of the opinion, however, that it would be economic to convert that field to a storage field and produce for the market from it? A. Yes, sir.

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By Mr. Ackerman:

Q. Mr. Spindle, apart from the geological considerations and the economic feasibility problems, what other considerations should be taken into account in determining whether to convert a producing field into a storage field? A. The proximity to their markets is one of the most important.

Q. Are there any others? A. I don't know just what you have in mind on other values. Economy has already been covered.

8738

Q. What I was trying to get at here was what you conceive the various factors to be that all add up to a decision one way or the other as to whether you would convert a producing gas field into a storage field. We have had testimony on the economics of the proposition. We have had some testimony as to the physical structure of the field.

Now you mentioned another aspect, which is the proximity to markets. I am asking if there are any others. A. I think perhaps the most valuable thing of storage to a pipeline is increasing the load factor, increasing the efficiency of the operation of the pipeline.

8739

Q. I believe you testified on direct that gas from the Howell field was presently being sold to Consumers Power Company. Is that correct? A. Yes, sir, it is.

Q. Are there any other customers of Panhandle you know of, receiving gas from that field at this time? A. I don't think so. The Southeastern Gas Company is on the tail end of Panhandle's line, but I just assumed that none of this gas gets to them. Consumers' market is pretty heavy between the geographical locations of the two.

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By Mr. Ackerman:

Q. If the field were converted into a storage field, what effect would that have on Consumers Power, if any? A. It should help their situation just the same as any other customers. They are a customer of Panhandle and they should get their proportional benefit of any assets in that project.

Q. Do you think that there might possibly be any conflict in terms of interest on the one hand of storing gas, and on the other hand of supplying gas at particular times to Consumers Power?

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A. I don't know of any.

Q. Let met ask you this question, Mr. Spindle: Taking into account all of these various considerations that have been mentioned, including this last one, is it within the realm of possibility, either because of facts that you don't

know at this point, but which might exist, or because of facts that you do know, that Panhandle as a matter of sound business judgment could properly decide not to use the Howell field as a storage field at this time? A. Of course I can't tell you what their thinking is, but I have no reason to believe that these facts as I have tried to relate them, are certainly known to them and the economics should be as obvious to them as it apparently is to me.

Q. I understand that, Mr. Spindle. What I am asking you is whether it is your position that Panhandle would be acting arbitrarily and unreasonably—that is, almost in a preponderous fashion, if they were not to convert the Howell field into a storage field at this time.

In other words, do you take that position? A. I couldn't say that because I don't know of the economics or the factors behind it, such as contracts, gas supply and all sorts of things.

Q. In other words, then, there are factors which Panhandle could reasonably take into account in arriving at

a decision of its own as to whether or not the Howell field should be utilized as a storage field at this time? A. I don't know of any specific factors, but I would think there are factors, yes.

Mr. Ackerman: Thank you. That is all.

Presiding Examiner: Cross Examiner by any other counsel?

Mr. Shibley: I have one question only.

Presiding Examiner: Very well, Mr. Shibley.

By Mr. Shibley:

Q. Mr. Spindle, were you asked a question as to Michigan Consolidated's proportionate share of this storage

deliverability? A. No. Michigan Gas Storage share—wasn't that the question?

Mr. Shannon: The question was Consumers Power Company.

Q. Let me ask the question: Does Michigan Consolidated wish to purchase a proportionate share out of the Howell field?

Mr. Shannon: I think I will object to that, Mr. Examiner. This witness hasn't been offered for that purpose.

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A. I don't know.

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Redirect Examination

By Mr. Shannon:

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Q. You were asked also on cross-examination whether or not in your opinion, Panhandle would be acting arbitrarily or ill-advisedly in not developing this field for storage.

I would like to ask you whether or not, if you were asked for your recommendation for the development of this field for storage, would you recommend that it be developed for storage?

* * * * * * * * * * *

A. If Michigan Consolidated Gas Company owned the Howell field, I would recommend its development for storage purposes.

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9015

George Ballard

was called as a witness, having been first duly sworn, was examined and testified as follows:

Direct Examination

By Mr. Shibley:

Q. Mr. Ballard, will you please state your full name and address, if you have not already done so. A. George L. Ballard, 8556 Mendota Avenue, Detroit, Michigan.

Q. Will you state what your educational background is and your other qualifications with respect to the testimony which is intended to be given? A. I am a graduate of the University of Wisconsin, 1916, in electrical engineering.

From the first of July, 1916 to December 1, 1916, I was employed by the Cities Service Company in Toledo, Ohio.

From December 1, 1916, to September 1, 1931, I was with the Cities Service Company and affiliate companies as an industrial gas sales engineer.

From September 1, 1931, to September 1, 1955, I was with the Panhandle Eastern Pipe Line Company. My principal activities were with regard to industrial applications of natural gas in conjunction with the utility industrial engineers. Also making market surveys for all types of

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classifications of service.

On September 1, 1955, I established a private practice as a professional engineer in consulting natural gas practice. I am a registered professional engineer in the States of Michigan and New York. I am a member of the National Society of Professional Engineers, Michigan Society of Professional Engineers, Michigan Engineering

Society of Battle Creek, Michigan, and the Engineering Society of Detroit.

Q. Mr. Ballard, have you examined Michigan Consolidated's exhibit, No. 237 in this proceeding? A. Yes, I have.

Q. Do you have that exhibit before you? A. Yes; I do.

Q. Have you been instructed to conduct a market survey in relation to the 25 industrial installations shown on Exhibit 237? A. Yes, I have.

Q. Will you state whether you have conducted such a survey? A. I did.

Q. Turning your attention to the fifth column of Exhibit 237, you observe, do you not, that the equivalent cost of gas is computed on the basis of gas having a heating value of 1,000 Btu's per cubic foot. Mr. Karl Schmidt, vice

president of Michigan Consolidated, testified at transcript 8614, that the heating value of the gas distributed by Michigan Consolidated is 975 Btu per cubic foot for Michigan-Wisconsin gas, and that when averaged with higher Btu content of the Panhandle gas, the average Btu value of Michigan Consolidated gas is 980 Btu.

Have you made a determination of the actual heating value of gas distributed by Michigan Consolidated? A. I have.

Q. Please state what data you have used in that determination? A. I relied on the Michigan Consolidated Gas Company's annual report filed with the Michigan Public Service Commission.

Q. On what date was that report executed, if you know? A. The report was executed on March 31, 1955, and the information obtained is on line 21 of page 627 of that annual report.

Q. Will you state what the heating value of Michigan-Wisconsin gas is as revealed by that data? A. 958 Btu.

Q. Will you state what the heating value of Panhandle gas distributed in Detroit is, based upon Michigan Consolidated's report? A. 981 Btu per cubic foot.

9018

Q. Is the average Btu of gas distributed by Michigan Consolidated shown on that report? A. Yes. As I said, it is on line 21, page 627.

Q. What is the average Btu of gas distributed by Michigan Consolidated? A. According to this figure, it is 968 Btu.

Q. Mr. Ballard, what is the effect of converting column 5 of Exhibit 237 from the assumed heating value of 1,000 Btu to the actual heating value of 968 Btu? A. The effect is to reduce the equivalent cost of gas—in other words, for each of the 25 industries shown on Exhibit 237, the equivalent price of gas is lower than the cost shown in column 5.

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Q. Mr. Ballard, what would be the accurate cost of gas for the data shown in column 5 if the actual heating value of Michigan Consolidated's gas had been used by its witness in preparing this exhibit? A. The cost would be reduced 3 2/10 percent.

Q. Mr. Ballard, starting with Industry No. 1 and going through consecutively to No. 25, will you please state the equivalent cost of gas per Mcf reflecting the correction of 3.2 percent? A. Taking the customers by number, I will give the number of the customer and the revised price.

No. 1, 33.30 cents.
No. 2, 32.23 cents.
No. 3, 35.72 cents.
No. 4, 30 cents.
No. 5, 33.3 cents.
No. 6, 38.3.

No. 7, 33.3.
No. 8, 31.27.
No. 9, 35.04.
No. 10, 32.62.
No. 11, 37.27.
No. 12, 36.3.
No. 13, is 43.75.

9020

No. 14 is 34.85.
No. 15 is 31.65.
No. 16 is 32.62.
No. 17 is 36.30.
No. 18 is 34.27.
No. 19, 31.07.
No. 20, 33.49.
No. 21, 34.46.
No. 22, 31.10.
No. 23, 33.88.
No. 24, 28.85.
No. 25 is 32.62.

9021

Q. Mr. Ballard, with respect to No. 22, you stated that the revised price would be 31.10, which is the same price already shown. A. That is an error.

Q. Is that an error? A. It is.

Q. Is that approximately 30.10? A. 30.10, yes, that is correct.

Mr. John McGrath: Will you give that figure?

The Witness: 31.

Presiding Examiner: 30.10.

The Witness: Right; 30.10.

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Q. Mr. Ballard, will you state whether each of the

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industries shown on Exhibit 237 was contacted either by you personally or by someone under your direct supervision and direction? A. Yes, that is right.

Q. Was the material which constitutes the end product of your market survey determined as a result of the study and canvass to which you have just testified? A. Yes.

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Mr. Shannon: May I be heard a moment to explain this, Mr. Examiner. What we have shown in Exhibit 237 is a potential market on the basis of competitive fuel prices. Mr. Schmidt was asked, and he expressed his opinion, that in his judgment these loads could be attached on an interruptible basis at a rate of 35 cents.

Mr. Schmidt was competent to express that opinion because of his experience with the company in selling industrial gas, interruptible gas, over the years.

Mr. Schmidt did not on direct examination undertake to quote what Cadillac or anybody else said to him with respect to whether or not they would or would not buy these volumes of gas. That type of inquiry is beside the point because you are talking about Btu's here. You are talking about the cost of competitive fuels.

All we had to show was that there is this potential market on a competitive price basis. We are not saying that we are going to sell precisely these volumes to these customers. He was asked on cross-examination, not on direct, as to whether or not these customers had indicated any interest. He mentioned some which had come to the company and requested service.

9027

I think one of them was Briggs Manufacturing Company, where they had a long pending contract.

He did not undertake to talk for those companies with respect to their plans to purchase or not to purchase gas, and he wouldn't have been qualified to do it. If this witness is permitted to get into that, I am denied any cross-examination because I can't cross-examine the man that he talked to.

Secondly, what difference does it make whether he talked about what they said to him? That is entirely beside the point. Our showing here is that this is a potential market, not on the basis of what somebody said in one of these companies but on the basis from an economic standpoint of competitive fuel prices it represents a potential market, which in our judgment we can attach at the price we have in mind.

That was the sole scope of Mr. Schmidt's testimony. He did not say that Budd Company had told him they would buy this gas. That would have been hearsay and he didn't do that and I didn't take that up with him.

As far as his going to the individual companies is concerned, he testified that every one of these companies was contacted and his information, his data as to use and price of coal, was obtained by someone acting under his immediate direction.

We have 3,000 industrial customers and it is not the function of the chief engineer and vice president to go out and contact individual industries. That is why they have an

industrial sales department working under his direction to do that.

One man physically couldn't cover 3,000 industries. All this is just taken out of the type of competitive fuel survey which Michigan Consolidated has all the time. This doesn't represent all the potential industrial loads in Detroit. They were just chopped off here at a price.

If you want to go down to a lower price, you could increase this volume by 20 billion or 30 billion feet more; maybe 50 billion feet. Any distributing company does that as a matter of normal operations.

I haven't any objection to Mr. Ballard testifying to any data he or someone acting under his direction obtained. I do object very strenuously to his undertaking to express or to quote any statements made to him by anyone in these companies. We will be here for another three months, Mr. Examiner, if we get into that.

In the first place, you take the Cadillac Motor Car Company and Chrysler Corporation; just to find the person in those organizations that you should talk to—I went through a proceeding in 1948 involving Panhandle where we had industrial representatives on the stand. That case went on for months and months.

The operations of these companies change from day to day. They testified their equipment is moved from one plant to the

9029

other. Uses of gas change. That is all immaterial. It is not important whether there is 50,000 tons at Cadillac at that particular point. All we are showing is a potential market as an economic potential based upon competitive fuel—not based upon conversations with anybody.

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Mr. Shannon: On that subject, Mr. Examiner, as far as tying this thing up, Panhandle has got a rate schedule in effect now. The I-1 schedule. It is mandatory and says they shall offer this gas to us. They don't like the I-1 schedule. We realize that, and they are appealing it.

But it happens to be in effect. We are not tying up anything. They talk about no take-or-pay-for. That is

because there is no take-or-pay-for in the I-1 schedule. We didn't write the I-1 schedule. The Federal Power Commission did, after a hearing, and we are prepared—in fact, it is Panhandle's obligation, it isn't our obligation to seek out this gas, it is their obligation to offer it to us.

We don't have to show any market here. All we have to say is we are willing to buy 100 million cubic feet a day under the I-1 schedule, and sign the service agreement for that, and that is it.

It is no business of Panhandle's what we do with the gas. Whether we blow it into the air or whether we sell it all to one company, or 40 companies, these or any others.

As far as this export case is concerned, I have made that clear at the outset. You just can't authorize that exportation as long as there is a demand in the United States for the gas.

9043

Presiding Examiner: Mr. Shannon, do I understand, then, that your position was that Exhibit 237 is offered and was received in evidence for a limited purpose, to show a prospective market simply at competitive fuel prices, and that you don't purport that it establishes that you will be able to make any particular sale shown amongst the 25 listed?

Mr. Shannon: That is it exactly. That is an excellent statement of our position. We show a potential market on the basis of competitive price of fuels. We don't say we are going to sell precisely that volume of that gas to each of the companies listed, because that isn't the point.

We could have shown 40 billion feet of gas in here. We cut it off at 20. It is just a matter of dollars against Btu's, Mr. Examiner, as you know. That is all you sell.

When you sell interruptible gas, you are selling Btu's. And the question is: Are the advantages of gas at this

price over the fuel they are using at a slightly less price outweighing? That is a judgment the management makes of each of these companies when that service becomes available.

We show that in our judgment, based on this data and our experience, we have that potential market.

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9072

George Ballard

By Mr. Shibley:

Q. Mr. Ballard, was a survey conducted either by you personally or by someone under your direct supervision and direction with respect to the Kelsey Hayes Wheel plants shown as Items 14 and 15 on Exhibit No. 237?

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A. There was. I contacted Mr. Charles Williams, purchasing agent for the Kelsey Hayes Wheel Company.

Q. Can you state whether the Kelsey Hayes Wheel Company is installing entirely new coal handling and burning equipment for their boiler plant in order that they will be able to use a cheaper grade of coal? A. Mr. Williams stated just that fact to me.

Q. Can you state whether it would be necessary substantially to revamp their boiler setting in order to accommodate natural gas?

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A. It would.

By Mr. Shibley:

Q. Does your answer apply both to the McGraw plant, which is Item No. 14, and to the plant at 3600 Military,

which is Item No. 15? A. At the McGraw plant, they are at the present time installing new coal handling and burning equipment. At the Military plant is where they would have to make a material change in their boiler settings, remove the stokers and so forth, to put the gas burning equipment into the boilers.

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Q. Mr. Ballard, will you turn now to Item No. 8 on Exhibit No. 237, the Detroit City Board of Water Commissioners. Will you state whether you personally or someone under your supervision and direction conducted the survey with respect to that item? A. In the case of the Detroit City Board of Water Commissioners, I contacted personally Mr. Gerald Remus, a general manager of the power plant operations.

9076

Q. How long have you known Mr. Remus? A. About ten years.

Q. Where in relation to your home is Mr. Remus' home? A. Across the street.

Q. Mr. Ballard, will you state what type of boilers there are in the Springwell station which I believe is the installation shown as Item 8 on Exhibit 237? A. The type of boilers in the Springwell station are under-fed stoker-fired.

Q. Would substantial construction be needed in order to convert to natural gas? A. A material amount of construction work would be necessary, and the removal of the under-fed stokers.

Mr. Shibley: Your Honor, if permitted to testify, this witness would testify that the Water Board is not interested in purchasing gas on an interruptible basis at a 35 cent

cost, and that they have had no proposal whatever from Michigan Consolidated with respect to the installation shown as Item No. 8, the Springwell station at 8300 West Warren.

By Mr. Shibley:

Q. Mr. Ballard, will you please state whether you personally, or someone under your supervision and direction, conducted a survey of the Herman Kiefer Hospital shown as Item No. 11 on Exhibit 237?

9077

A. The Herman Kiefer Hospital was contacted by an assistant under my jurisdiction, and under my direction.

Q. Was the survey to which you have testified conducted with one of the officials of the Herman Kiefer Hospital? A. Yes. Mr. McKenzie, superintendent of the power plant, was contacted in this particular case.

Q. On the basis of that survey, can you state whether or not the hospital has recently rebuilt their stokers? A. They have, spending to the extent of $15,000 on rebuilding the stokers.

Q. Mr. Ballard, will you state whether a survey was conducted either by you personally, or under your supervision and direction, of the Packard Motor Division shown as Item No. 19 on Exhibit 237? A. The Packard Motor Car Division was contacted under my jurisdiction.

Q. Can you state whether as a result of the survey, the coal price shown in column 4 in Item 19 is accurate? A. The coal price which was given us was $8.10 per ton instead of the $8.35 as shown on Exhibit 237.

Mr. Shannon: Might I ask there, Mr. Shibley, was that for the year 1954, Mr. Ballard?

The Witness: That's right.

Mr. Shannon: $8.10?
The Witness: $8.10, yes.

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Mr. Shannon: That was given you by whom?
The Witness: Mr. Steiffel.

By Mr. Shibley:

Q. What is his position? A. He is superintendent of the power plant.

Mr. John Mc Grath: That figure of 31.07 you gave earlier did not reflect the $8.10 cost of coal?
The Witness: That is right.

By Mr. Shibley:

Q. Will you state what would be the equivalent cost per Mcf of gas if the correct cost of coal had been used? A. 30.15.

Q. Is that the correct price rather than the 32.1 cents shown on Exhibit 237? A. That's right.

Q. Will you state whether a survey was conducted with the American Agricultural Chemical Company, shown as Item No. 1 on Exhibit 237? Either by you personally or under your supervision and direction? A. The American Agricultural was contacted under my jurisdiction.

Q. Who was the person in that company with whom the survey was conducted?

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Q. Mr. Ballard, will you please state whether or not the Nash Kelvinator Division shown as Item 18 on Exhibit 237 was contacted in your market survey either by you personally or under your supervision and direction? A. The Nash Kelvinator Division was contacted under my super-

vision. Mr. Shipley, purchasing agent, and Mr. Clark, the power engineer, were both contacted in this

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Q. Can you state, based on that survey, whether or not the annual coal consumption of this plant is correctly shown on Exhibit 237? A. We were advised that their coal consumption for the year 1954 was 20,000 tons instead of the 10,545 shown on Exhibit 237.

Q. Will you state whether the delivered cost per ton of coal is correct as shown on Exhibit 237, based on your survey? A. In this particular case, we are advised that their coal costs for that period in which they used the 20,000 tons, was $8.14 per ton instead of $9.20.

Q. Giving effect to the corrections which must be made because of that factor, what cost equivalent would be shown in column 5 of Exhibit 237? A. Taking into account the Btu correction and so forth?

Q. Yes, please. A. 30.3 cents per Mcf.

Q. That is the figure that would be used, rather than the 35.4 cents shown on the exhibit? A. That's right.

Mr. Shannon: Might I ask there: The $8.14 according to the information furnished to you, Mr. Ballard, related to 20,000 tons of coal and not to 10,545 tons?

The Witness: That's right.

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Q. Mr. Ballard, will you turn to Item No. 24 of Exhibit 237, the Turnstedt Manufacturing Division of General Motors Corporation, and state whether or not a survey has been conducted by you or by someone under your supervision and direction with respect to that installation? A. With respect to that particular installation, I personally

contacted Mr. Baldwin, head of the power division of General Motors Corporation.

Q. What is the present equivalent cost of gas? A. At the Turnstedt plant?

Q. Yes. A. 28.8 cents per million Btu.

Mr. John Mc Grath: Where did that figure come from?

The Witness: That came from Mr. Baldwin, head of the power division of General Motors Corporation.

Mr. Shibley: If permitted to testify, the witness would state that this plant is not at all interested in interruptible gas; that the plant has not been contacted by Michigan Consolidated recently; and that no contact whatever has been made concerning short notice interruptible gas of the type with respect to which Mr. Schmidt testified.

By Mr. Shibley:

Q. Mr. Ballard, Michigan Consolidated's vice president, Mr. Schmidt, testified at transcript 8721 that Penn-Michigan

Company shown as Item 21 on Exhibit 237 was contacted early in the month of August 1955. Was a survey conducted by you or under your supervision and direction with respect to the Penn-Michigan installation shown as Item No. 21? A. The Penn-Michigan Manufacturing Corporation was contacted under my supervision. Mr. Gies, purchasing agent for the Pen-Michigan Manufacturing Corporation, was contacted.

Q. Can you state on the basis of that survey whether the Penn-Michigan Corporation plant has been sold? A. Mr. Gies advised us that this plant was sold on June 29, 1955.

Q. And as of what date must the premises be vacated

according to your best information? A. The premises are to be vacated by March 1956.

Mr. Shibley: If permitted to testify, the witness would state that, based on the representations of Mr. Gies, purchasing agent, the Penn-Michigan Manufacturing Corporation is not interested in converting to natural gas in these circumstances.

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Mr. Shibley: Mr. Examiner, on Friday afternoon Mr. Flax expressed a desire to pose some questions to Mr. Hager, who has not previously been a witness, but some of whose testimony in prior proceedings has been incorporated by reference in this proceeding.

We have Mr. Hager here. He has some very pressing commitments which will necessitate his leaving very shortly. We propose to put him on somewhat out of order and wait for Mr. Ballard's cross-examination until a later time, if that is agreeable to your Honor.

Presiding Examiner: Is there any objection to Mr. Hager being called for cross-examination at this time?

Apparently not.

Mr. Hager?

Whereupon,

M. K. Hager

was called as a witness, having been first duly sworn, was examined and testified as follows:

Presiding Examiner: Mr. Reporter, this is cross-examination upon the direct examination incorported by

9096

reference of this witness as a portion of Item XXXXX.

Cross-Examination

By Mr. Flax:

Q. Mr. Hager, you are the same M. K. Hager who has testified previously with regard to the capacity of the Lewisburg lateral, and the intentions of Panhandle with respect thereto as to the construction of additional facilities, is that correct? A. I have testified with respect to the capacity of the Lewisburg lateral. With respect to the rest of it, I don't know what you are talking about, Mr. Flax.

Q. Mr. Hager, at the present time is there any construction being undertaken or any plans for any construction for additional facilities with which to permit the delivery of greater volumes of natural gas through the Lewisburg lateral? A. No, sir.

Q. Is it presently Panhandle's intention to prosecute the proceedings now before the Commission to abandon service through the Lewisburg lateral to The Gas Service Company?

Mr. Shibley: Your Honor, I am not quite sure whether that is a proper question for this witness on this subject. I think that is probably more of a legal question upon which the company will have to rely upon its attorneys for advice.

Presiding Examiner: Read the question, Mr. Reporter.

(Question read)

9097

Presiding Examiner: The question is ruled out.

Mr. Flax: Mr. Examiner, I think that is a policy question, whether the company is going to continue with their efforts to abandon service to The Gas Service Company.

Presiding Examiner: It is not shown to be within the scope of this witness' direct examination, that he is qualified to testify on any policy question. Perhaps you may have a statement of counsel as to what—

Mr. Flax: May I inquire of counsel if there is any intention to prosecute that abandonment?

Mr. Shibley: I don't know whether I can limit it to quite what you refer to as "that abandonment." But the problem that is engendered by reason of The Gas Service Company's position as a taker of gas from Cities Service Gas Company as well as from Panhandle has not been ultimately resolved, and the company's lawyers are studying the possibilities with respect to that. No definitive action has been taken.

Mr. Flax: There is presently pending, is there not, Mr. Shibley, abandonment of an exchange agreement between Cities Service and Panhandle?

Mr. Shibley: Yes, that is correct. With respect to the abandonment of the Cities Service exchange agreement, I believe I can state the company's position, that they are prosecuting the Cities Service exchange agreement abandonment

proceeding and intend to.

The other matter, of course Central West has taken an appeal from the Commission's prior decision with respect to it, and Panhandle has intervened in that proceeding in the Third Circuit Court of Appeals.

By Mr. Flax:

Q. Mr. Hager, do you have any estimate of the cost of the additional construction that would be necessary on the Liberty lateral in order to permit the sale of 12,000 Mcf of natural gas per day to Central West Utility Com-

pany in addition to the other contract demands on the Liberty lateral which have been fixed by this Commission? A. No, sir.

Q. To your knowledge has Panhandle ever made any such estimate of cost? A. I can't recall that we have made any estimate from the standpoint of trying to find a real figure of cost, Mr. Flax, no. We made some what I call shotgun figures, but no estimate.

Q. Under what conditions, Mr. Hager, would you recommend that Panhandle undertake additional construction on the Lewisburg lateral in order to permit the delivery of 12,000 Mcf of natural gas to Central West Utility Company, in addition to those volumes that the Commission has directed to serve the other customers on the Lewisburg lateral?

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Presiding Examiner: Read that question, Mr. Reporter.

(Question read)

A. I would like to understand what you mean by "what conditions"? What are you talking about?

By Mr. Flax:

Q. If Central West Utility Company were willing to enter into an agreement for payment to Panhadle of a certain cost of the lateral facilities, would Panhandle then enter into construction in order to increase the capacity of the lateral?

Mr. Shibley: May I have that question read, please?

Presiding Examiner: Read the question.

(Question read)

A. When you talk about Central West making an offer to purchase some of the lateral facilities, of course I think

the record is plain on the subject that the engineering problem is not a simple one with respect to the so-called Lewisburg lateral. The question as to what part they would buy perhaps, and what would then be done, if reinforcement of the capacity is needed, is something I think we could negotiate.

As to what recommendations I would make to our management, that would depend on how those negotiations went.

By Mr. Flax:

Q. Suppose a customer on the Lewisburg lateral—not

necessarily Central West, but any customer—were willing to purchase that lateral so that Panhandle would no longer have the problem of delivery from the main line to the individual customers.

Under those circumstances, would Panhandle be willing to negotiate with Central West and Missouri Power and Light on the basis of their stated needs for natural gas?

In other words, if the question of rehabilitating or construction on the lateral wasn't Panhandle's problem, would Panhandle have other objections to selling Missouri Power and Light and Central West increased volumes of gas? A. Mr. Flax, I would have to check that question with the management, but I think I can safely say that we would be perfectly willing to negotiate, and I think the answer would be Yes. That is my own opinion.

Q. Of course my question assumed that Panhandle had the main line capacity with which to deliver such gas. A. Of course.

Q. If Panhandle were to enter into negotiations as to increased facilities on the Lewisburg lateral, would the scope of Panhandle's negotiations include perhaps a

sharing of cost of the construction on the Lewisburg lateral? In other words, would Panhandle be willing to pay for part of the construction of the lateral and let Central West pay for the other part?

9101

A. I can't answer that question. If you want my opinion, I will be glad to give it to you.

Q. If you have an opinion on it. A. I don't think we would.

Q. Why would Panhandle be unwilling to enter into any additional agreement that would provide for their paying any portion of the cost of the Lewisburg lateral?

Mr. Shibley: I object to the question, your Honor. This is a subject which has been a thorny problem for Central West and for all the parties, for a number of years, and Mr. Hager has testified that Panhandle would be willing to negotiate.

But I think, and I respectfully submit, that if we are to explore all the possibilities of negotiations here in the hearing room, we just eliminate any possibility that negotiations are going to be successful.

Mr. Hager, I believe can not tell just what the position of the company would be with respect to any given set of circumstances.

Presiding Examiner: It is true that Mr. Hager has often been mentioned in this proceeding as a policy witness of Panhandle Eastern. So I assume that he is a policy witness and certain policy questions would be proper of this witness.

However, I do have difficulty with this present question.

9102

For that matter, though, if the witness isn't in a position to say, or if the witness does not know, he could simply state that fact.

Mr. Shibley: Yes, your Honor. I don't mean to attempt in any sense to disqualify Mr. Hager as a policy witness. He is a top officer in the company. He is not disqualified.

My objection to the question doesn't go to his lack of knowledge because of his position, but rather to the fact that if any fruition is to come of any potential negotiations, the company shouldn't be urged to disclose what is really a confidential matter — namely, what positions it would take, if it were to negotiate.

Presiding Examiner: Do you press that question, Staff counsel?

Mr. Flax: I would like an answer to that, Mr. Examiner. The difficulty I have, I am afraid that Mr. Hager has made a statement my understanding of which is that they wouldn't enter into any negotiations by which they would pay for any portion of the lateral.

I think the next logical question to that is, why this is. We have a case where there are certain other proceedings here where they have entered and paid for laterals, and we want to know why they will in one case, and not in another.

I appreciate that if there are negotiations going on, it is well to have negotiations. If you can settle these

things out of court, it is very fine.

But we have had no indication that there are negotiations in progress on this record. I think you also have to consider that you can't negotiate away the public interest.

Whereas I don't want to disturb delicate negotiations which might be in the public interest, nevertheless, I think for this record's sake, if Mr. Hager can answer the question, I think it will be well if we have an answer on it.

Mr. Shibley: Mr. Examiner, the problem I have with it is that Mr. Hager testified he didn't know what the company's position was, and then he added an observation—

a thought of his own—that he thought perhaps they would not.

I think if we explore why he perhaps thinks they would not, we aren't really going to add anything to the record.

Presiding Examiner: There is merit to that, Mr. Flax. Anything the witness might say would not be the company's position, apparently, in view of his previous testimony that he didn't know what the company's position was.

At the same time, while the Examiner doesn't wish to tread upon delicate ground that may interfere with fruition coming of conference looking to the settlement of any feature of the Central West and Panhandle difficulties, the objection to the question is not well taken technically on the grounds of privilege, which would be the only possible objection.

9104

As counsel says, I don't know that the line of cross-examination would serve much purpose, because the witness says he doesn't know what the company's position would be. However, the objection is overruled to the pending question. We will see how far along we get.

Read the question, Mr. Reporter.

(Question read)

Presiding Examiner: Say why would Panhandle, in your judgment. Because the witness has already said he doesn't know what Panhandle's position is.

The Witness: Mr. Examiner, I will have to cover a few more things than just a bare subject of would we pay for a part of the facilities.

A. One of the things that has to be resolved with respect to service to Central West and Excelsior Springs in The Gas Service Company—since they are all tied up together

—first in my opinion, before any real approach can be taken to the question of capacity, is the abandonment proceeding as far as the exchange agreement is concerned, because that lateral capacity is tying up Panhandle's main line capacity, and that question must be answered.

I don't know how familiar everyone in this room is with the question of serving the load in the Kansas City area. If you will bear with me, I would like to review a little bit of what—as far as operations are concerned—are the controlling

9105

factors.

Kansas City is a growing city, like all the rest of them. Its city limits are expanding. They have already taken in some of our pipeline facilities, as far as the corporate limits are concerned. The laterals which serve the area generally—and particularly the eight-inch running from about Unity Farm. I think you are familiar with that point on the map—north to Liberty and Excelsior Springs, runs through an area which is being built up quite rapidly. Houses are being built over it all through the area.

We have cases of people building houses right on top of the pipelines, if we don't get them stopped. As far as the services to Central West and Excelsior Springs is concerned, the only plans I have seen brought forward by any of the people seem to contemplate high pressure service through this urban area.

I think it is just a matter of time until the operating pressures on such facilities are governed by the area the facilities traverse, rather than practical capacity consideration—just a matter of pressure and capacity.

So the long range proposition of serving Central West and Excelsior Springs must be looked at from the standpoint that those markets are some 50 to 60 miles away

from the pipeline. This isn't just a little lateral like Villa Grove and Arthur and some other little towns which are practically

9106

right on top of the pipeline. You asked me if Panhandle will under those circumstances pay for part of these facilities. I tell you in my opinion it is not an economic service for Panhandle to get any further embroiled in. I don't think we will ever get our money back.

By Mr. Flax:

Q. Have you had the opportunity to examine the alternate projects submitted in this record by Mr. Patterson, representing Central West? It is Exhibit 128 in these proceedings. A. May I see it? I have looked at some of those.

Yes, I have seen that.

Q. Have you had an opportunity to evaluate the statements of estimated cost of Mr. Patterson as to such construction? A. It seems to me he estimated the necessary costs at something around better than $600,000, isn't it? That is my recollection.

Q. I believe it was about $800,000. I am not sure, Mr. Hager. A. I don't remember.

Presiding Examiner: Can counsel for Panhandle Eastern help us out on that point? Do you recall, Mr. Shibley?

Mr. Shibley: I don't have the figure. My own impression was that it was something around the $800,000—approaching a million dollars. I might observe that Mr. Hanna

9107

was here at the time and did explore this. My recollection is that some questions were posed to him by Mr. Flax

along this line, and at that time we had the figures in mind. I don't recall them now.

Presiding Examiner: Apparently, then, it was in the neighborhood of $800,000.

By Mr. Flax:

Q. In the light of your construction of additional capacity along laterals to certain other customers, Mr. Hager, have you compared the estimated cost of the construction set out by Mr. Patterson—that is, whether such cost is unreasonable in the light of the costs of construction of laterals to other of Panhandle's customers? A. I think they are unreasonable. I would like to point out that on some of these little lateral reinforcements we are trying to make at this time, some of them involve looping for short distances of two-inch lines and things like that.

Economies don't get into that sort of a thing, Mr. Flax, when you are trying to serve a town which has been hooked on for 20 years and it is right up against the pipeline. It has had a short stretch of two-inch line serving it.

As far as I am concerned, economies don't mean anything in that sort of thing. It is the sort of thing you have to do,

I think. The question of whether we ever get our money back from those facilities is something else, too, I think.

But from the standpoint of Mr. Patterson's investigation, as I remember it, all he did was put it on a peak day provision and he gave no consideration to the load factor—that is, the annual quantity involved.

This suburban Kansas City load, there being no industrial load there, and apparently it doesn't appear there is going to be any there. It is purely a residential and domestic load.

Last winter, for instance, Central West took about six million cubic feet on a cold day and their July average ran something like 350,000 cubic feet a day. As I understand it, their projections for the 12 million cubic feet are just about on the basis of doubling the present annual load.

Obviously, it is nothing but a heating load involved, around 25 percent load factor, and with respect to the other laterals, we have a plan for certificates on, if you consider it from the stand point of the additional investment per additional load handled or per additional dollar revenue received, the unit cost on an annual basis is something like 2½ to 3 times with respect to the cost of reinforcing the Liberty facilities.

I think it is about three times the cost generally that we think we will experience on the other facilities.

So in my estimation, there is another example of why

it isn't economic to reach way out here and try to serve this type of load so far off the pipeline.

Q. Do you have any studies to that effect, Mr. Hager, available here? A. I haven't made any studies—detailed studies. When you mean "studies," work papers and that sort of thing?

Q. Yes. A. No, sir, we have made some figures. I submit they are easy to make.

Q. Mr. Hager, do you have any suggestion as to where the customers located on the extension of the Lewisburg lateral might get additional volumes of gas in order to satisfy their needs and requirements? A. I think it can clearly be shown that that is an area that should be served by Cities Service Gas Company, Mr. Flax.

Q. And Panhandle's attitude is that it would be willing to turn over the whole area to Cities Service Gas Company to serve? A. I think we would.

Q. Have you entered into any negotiations with Cities Service toward that end? A. We have talked with them since 1950, 1951, a couple of times about that. Negotiations—I don't know whether you would define them as negotiations or not. We

9110

have talked with them—showed them the problem.

They have made connections from Cities Service directly to Gas Service Company towns which are in this local area.

* * * * * * * * * *

By Mr. John McGrath:

Q. Mr. Hager, as your counsel has stated, all this conversation and testimony that has been going on here isn't worth very much, because it is just your opinion. In past instances throughout these proceedings you have been purported to be the policy witness. Now it turns out that you are an officer of the company, and we are receiving your opinion, rather than the policy of the company.

Who would we have to discuss these problems with on the stand, in order to get the definitive policy of Panhandle?

Mr. Shibley: Mr. Examiner, I am sure that the speech that Mr. McGrath has made wasn't a question really directed toward the witness. That type of inquiry is directed towards counsel.

I think it contains a material erroneous impression of the record.

Presiding Examiner: I think so too. Certainly the witness' answer to the last question, for instance, was as a

9111

policy witness of the company and not expressing a personal opinion.

Mr. Shibley: Yes, your Honor. He is a policy witness.

Presiding Examiner: He is a policy witness.

Mr. Shibley: With respect to this problem we have before us, he is qualified as to policy. But that doesn't mean he knows the answer to everything the company might conceivably do. That was the only limitation on that one answer that he gave.

The Witness: I will subscribe to that, Mr. Examiner.

By Mr. John McGrath:

Q. In regard to that particular question which you stated you did not know, who would be the person to answer it? A. Which question was that, Mr. McGrath?

Q. As to whether you would share in the cost of construction of the line. A. After all, we have to run this pipeline like a business is run, Mr. McGrath. Expenditures have to be approved by the board of directors. I am not a director of the company, and there are certain necessary steps which must be done within the company before anybody can commit any funds to any such investment.

I certainly can not commit the company here on the stand.

Q. If the Waverly storage had proved satisfactory, would

your opinion have been altered?

Mr. Shibley: Mr. Examiner, that isn't relevant to this proceeding, what would have happened if Waverly had proved to be feasible. It proved that it wasn't feasible for this proceeding. It certainly isn't going to help the record to find out what he would have done if Waverly had been feasible. It has no relationship to this problem at all.

Presiding Examiner: I can't see that it makes any difference.

Mr. John McGrath: It has this relationship, Mr. Examiner, in that he stated it would be uneconomic to construct this lateral because of the low load factor. Certainly the problem of storage would have some effect on that decision.

Presiding Examiner: Objection overruled.

A. It may be your opinion that it is a problem of storage—

By Mr. John McGrath:

Q. I don't have one, Mr. Hager. A. —that would have some effect on that thing. I say that would be your opinion, but certainly isn't my opinion.

Q. I don't have an opinion. I am asking yours.

Presiding Examiner: So the answer is, Mr. Witness, it would not make any difference in—

The Witness: I think that is right, Mr. Examiner. It wouldn't make any difference.

Presiding Examiner: Your position would be the same, even though the Waverly storage project had proved out satisfactorily at this stage, is that right?

The Witness: Certainly.

By Mr. John McGrath:

Q. Would that also hold true if it were to appear that within the immediate future there would be a development of satisfactory storage? A. Yes.

Q. Would your opinions still be based upon the fact it would be uneconomic to serve that particular load because of its low load factor? A. Yes, sir.

Mr. John McGrath: That is all I have, Mr. Examiner.

Presiding Examiner: Does any other counsel have any cross-examination of this witness?

Mr. Shannon: I have one or two questions.

By Mr, Shannon:

Q. Mr. Hager, do you have any rule of thumb method of determining whether the construction of a particular lateral is economic from the standpoint of the pipeline?

What I have in mind is, is some equivalent pipe size related to distance or cost, and in turn related to the

9114

demand? A. No, Mr. Shannon, there is no rule of thumb.

Q. Did you recommend the construction of the proposed lateral to Peoria, which is 58 miles of 16-inch to cost some $3½ million? A. You say did I recommend it?

Q. Yes. A. Do you mean did I institute the recommendation?

Q. Let me rephrase the question.

Did you as an engineer consider that an economic construction? A. Yes.

Q. Could you tell us how you arrived at that conclusion? A. The market up there has considerable industrial load attached. It has considerable industrial potential, and it justified the cost of that lateral.

Q. In other words, you related the cost against the— A. Load factor.

Q. Load factor? A. Yes.

Mr. Shannon: Those are all the questions I have.

Presiding Examiner: Any other counsel have any cross-examination?

Any redirect?

9115

Mr. Shibley: We have no redirect.

Mr. Flax: Just a moment, Mr. Examiner.

By Mr. Flax:

Q. Mr. Hager, have you or Panhandle made any specific industrial survey of the area in which Central West and

Missouri Power and Light are located on the Lewisburg lateral, in order to determine its industrial potentialities? A. I don't think it is necessary in that area, Mr. Flax. That isn't an industrial community. There is no heavy industry there of any consequence.

* * * * * * * * * * *

George Ballard

was recalled as a witness,

* * * * * * * * * * *

9144

By Mr. John McGrath:

Q. Mr. Ballard, are you familiar personally with these companies set forth on Exhibit 237 as a result of your tenure of duty with Panhandle from 1942 onward? A. A good many of them, yes.

Q. Do you know what type of equipment the Chrysler

9145

Corporation Company No. 5 has at Jefferson? A. Do you have reference to the coal burning equipment?

Q. Coal burning equipment, yes. A. I do not.

Q. Do you know what type of equipment any of these particular companies have as far as coal burning equipment? A. If you have reference to detailed equipment with regard to the size and capacity of the boilers and so forth, I do not.

Q. No. Whether or not they are stoker-fired or— A. That's what I mean.

Q. You don't have that information? A. No.

Q. Are you familiar with what type of operation must be instituted and what type of equipment would have to be installed should gas be used in these plants on an interruptible basis?

* * * * * * * * * * *

9146

A. I do not, because it would necessitate a careful examination and analysis of the situation, the location of the equipment, and so forth, whether stoker-fired, the type of stoker, powdered fuel, or what, to determine what equipment would be necessary to make the changeover.

Each individual case would require careful study and analysis.

By Mr. John McGrath:

Q. Drawing upon your general knowledge, let us assume for the moment that the Chrysler Corporation presently uses under-fed stokers. In order to use natural gas on an interruptible basis and also avail itself of the stoker

9147

equipment, what physical operations must of necessity be performed in order to convert one to the other? A. Reconstruction of the fire box to permit the installation of the gas burning equipment above the under-fed stokers would be necessary.

Q. Does it entail removal of certain portions of the stoker equipment before using natural gas—that is, the immediate changeover, when you change over from one fuel to the other? A. Yes, it would. Not knowing just what the Chrysler installation is, it is difficult to say. I know of some instances where it has been possible, the construction of the fire box is such that the gas burning equipment could have been placed above the under-fed stokers. I have seen installations where the burners were put through the back wall of the boilers. In those particular cases, it was not necessary to remove the chain grid stokers.

But as I say, each individual case requires a definite engineering study and survey to see what the actual cost

of the changeover is, and what has to be done and what does not is involved.

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9150

Q. In determining the competitive situation between natural gas and coal, in your opinion, if you were to make a study to determine the competitive situation, would you apply those efficiencies as they pertained to each individual company? A. That is the only reasonable way that you can apply your gas efficiencies and coal efficiencies to the particular installation.

Q. As a result of your familiarity with the industrial market, have you found that large modern installations using coal-handling and coal-firing equipment, that their maintenance personnel averages about the same as those using natural gas? A. Depending on the type of service. On firm service, if you are buying gas for a boiler plant on firm service, you will have one condition. If you are buying it on an interruptible basis, you have an entirely different condition.

Q. Let's place it on an interruptible basis. A. On an interruptible basis, there will be little, if any, change in your operating expenses, particularly as far as personnel is concerned, and depending on the period that you are able to use natural gas on an interruptible basis, if you use it ten or 11 months out of the year, you might find a slight decrease in certain maintenance costs such as brick walls, fire-brick walls, and less dust

9151

clearing and items of that nature.

But on an off and on proposition on an interruptible basis, there is little difference in the operating costs. By

"operating costs," I mean from a maintenance standpoint.

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Mr. Shibley: Mr. Examiner, I want the record to show that under date of October 4, 1955, over the signature of Hugh C. Dailey, who is a vice president of Michigan Consolidated Gas Company and also an assistant secretary, the following letter was sent.

"Enclosed is a copy of the transcript and exhibit—

Presiding Examiner: Sent to whom?

Mr. Shibley: It was sent to various of our customers. We have not checked every one of them, but it was sent to a number of them.

9175

It reads as follows:

"Enclosed is a copy of the transcript and exhibit presented by the Michigan Consolidated Gas Company in the certificate proceedings involving Panhandle Eastern Pipe Line Company, which is now in progress before the Federal Power Commission."

"This testimony clearly shows that Panhandle now controls and can immediately develop a large underground gas storage field in Michigan with the gas which Panhandle is proposing to sell at unregulated rates to the Union Gas Company of Canada.

"If Panhandle will use its gas for the benefit of its customers in this country, instead of exporting it to gas-rich Canada, Panhandle can store 18.4 billion cubic feet of gas in its Howell storage field and increase its peak day deliveries by 282 billion cubic feet.

"This storage operation which would be of such value to all customers on the Panhandle system, could be developed at an additional cost to Panhandle at only approximately $8½ million. Certainly this is an economical means whereby Panhandle can meet the requirements of its customers."

"Very truly yours, HUGH C. DALY."

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VOL.

II

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OCT 11 1957
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United States Court of Appeals

FOR THE THIRD CIRCUIT

No. 12,069

MICHIGAN CONSOLIDATED GAS COMPANY, a corporation,
Petitioner

v.

FEDERAL POWER COMMISSION

No. 12,118

THE CENTRAL WEST UTILITY COMPANY

v.

FEDERAL POWER COMMISSION

On Appeal from Orders of the Federal Power Commission

JOINT APPENDIX

Volume II

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Answer and Objection of Michigan Consolidated Gas Company to Application of Panhandle Eastern Pipe Line Company for Temporary Certificate—Docket No. G-2433	18166-18174	III	1081-1090
Petition of Michigan Consolidated Gas Company for Leave to Intervene in Docket No. G-2475	18185-18194	III	1091-1097
Notice of Intervention by Michigan Public Service Commission in Docket No. G-2475	18202	III	1097-1098
Application of Michigan Consolidated Gas Company for Rescission of Temporary Certificate or Rehearing and Stay filed October 1, 1954	18223-18247	III	1099-1123
Order issued November 2, 1954 permitting intervention	18256-18258	III	1124-1126
Order of November 2, 1954 consolidating proceedings and fixing date of hearing	18259-18261	III	1127-1131
Application of Panhandle Eastern Pipe Line Company for Temporary Authorization to Operate Facilities	18302-18308	III	1131-1137

	Record pp.	App. Vol.	App. pp.
Telegram of December 6, 1954 Michigan Consolidated Gas Company to Federal Power Commission objecting to temporary authorization	18317	III	1137-1138
Answer and Objection of Michigan Consolidated Gas Company to Application of Panhandle Eastern Pipe Line Company for Temporary Authorization to Operate Facilities—Docket No. G-2433	18318-18329	III	1139-1149
Order of December 22, 1954 Granting Temporary Authorization to Operate Facilities—Docket Nos. G-1705 etc.	18342-18354	III	1150-1163
Presiding Examiner's Report to Commission of Motion to Dismiss Docket No. G-2475	18411-18412	III	1164-1166
Order Issued January 20, 1955 Denying Motions to Dismiss Proceedings and Granting Motions to Sever Other Proceedings	18427-18428	III	1167-1168
Petition of Michigan Consolidated Gas Company for Leave to Intervene in Docket No. G-8665 ..	18607-18612	III	1169-1173
Notice of Intervention of Michigan Public Service Commission in Docket No. G-8665	18632-18633	III	1174-1175
Order of June 27, 1955 Consolidating and Reconvening Proceedings and Specifying Procedure	18776-18778	III	1176-1179
Order of June 27, 1955 Permitting Interventions in Docket Nos. G-1705 etc.	18779-18781	III	1180-1182
Motion of Central West Utility Company to Dismiss and Answer to Application of Panhandle Eastern Pipe Line Company for Temporary Authority, Request for Oral Argument and Memorandum in Support of Above Matters	18864-18868	III	1183-1186
Order Issued October 5, 1955 Granting in Part and Denying in Part Applications for Temporary Certificate—Docket Nos. G-1705 etc.	18900-18911	III	1187-1203
Letter Dated October 27, 1955 Panhandle Eastern Pipe Line Company to Federal Power Commission submitting new service agreements	18914-18920	III	1203-1209
Decision of Presiding Examiner Issued March 6, 1956	19233-19367	III	1210-1256
Exceptions of Michigan Consolidated Gas Company to Presiding Examiner's Decision Filed April 5, 1956	19532-19541	III	1257-1265

	Record pp.	App. Vol.	App. pp.
Exceptions of Staff Counsel to Initial Decision of the Presiding Examiner (Exception No. 5)	19622-19623	III	1266
Order Issued May 18, 1956 Severing Proceedings and Directing Sale and Delivery of Natural Gas	19773-19787	III	1267-1288
Opinion No. 292 Issued June 30, 1956	19795-19836	III	1289-1346
Application of Central West Utility Company for Rehearing Filed July 30, 1956	19840-19867	III	1347-1372
Application of Michigan Consolidated Gas Company for Rehearing Filed July 30, 1956	19893-19904	III	1373-1383
Order Issued August 8, 1956 Denying Rehearing	19915-19918	III	1384-1388
Exhibit XI-2 to Application in Docket No. G-2433 —Market Data—Annual Requirements by Classes of Service	19941-19944	III	1389-1392

United States Court of Appeals

FOR THE THIRD CIRCUIT

No. 12,069

MICHIGAN CONSOLIDATED GAS COMPANY, a corporation,
Petitioner

v.

FEDERAL POWER COMMISSION

No. 12,118

THE CENTRAL WEST UTILITY COMPANY

v.

FEDERAL POWER COMMISSION

On Appeal from Orders of the Federal Power Commission

JOINT APPENDIX

Volume II

(Exhibits and Items by Reference)

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PANHANDLE EASTERN PIPE LINE COMPANY

CONSTRUCTION COST ESTIMATE

SCHEDULE NO. 1

DOCKET NO. G-2433

SCH. NO.	ITEM	NUMBER & UNITS	UNIT COST	AMOUNT	TOTAL
1	**SUMMARY**				
	WELLS				
2	Waverly Storage Field Wells	20 Ea.	$ 40,000	$ 800,000	$ 800,000
	FIELD LINES				
3	Waverly 30" Suction Line	1.15 Mi.	114,783	$ 132,000	
4	Waverly 24" Discharge Line	2.00 Mi.	82,500	165,000	
5	Waverly 12" Lateral Well Line	.34 Mi.	46,766	15,900	
6	Waverly 10" Lateral Well Line	.50 Mi.	30,800	15,400	
7	Waverly 8" Lateral Well Line	2.65 Mi.	32,868	87,100	
	Total Waverly Field Lines	6.64 Mi.			$ 415,400
	METER STATION				
8	Waverly Meter Station	1 Ea.	76,000	$ 76,000	$ 76,000
	COMPRESSOR STATION				
9	Waverly Compressor Station	4,000 HP	272	$1,086,000	$1,086,000
	DEHYDRATION				
10	Waverly Dehydration Plant	1 Ea.	216,000	$ 216,000	$ 216,000
	Sub Total				$2,593,400
	Contingencies - 3%				77,800
	Total Waverly Storage				$2,671,200

FEDERAL POWER COMMISSION
Docket No. G-1705 etal
Hearing Ex. No. 9
Date Identified 1/5/55
Date Admitted 4/18/55

Hearing Exhibit No. 9 (9409)

PROJECT: Summary of Transmission System Construction Cost Estimate to Increase System Capacity.

PAGE NO. 1 OF 3 SCHEDULE 1

5409

PANHANDLE EASTERN PIPE LINE COMPANY

CONSTRUCTION COST ESTIMATE

SCHEDULE NO. 1 — DOCKET NO. G-2433

SCH. NO.	ITEM	NUMBER & UNITS	UNIT COST	AMOUNT	TOTAL
	LATERAL LOOP LINES				
11	Peoria Lateral (16"), including 3 River Crossings	58.30 Mi.	$ 43,980	$2,564,000	
12	Anderson Lateral (10")	11.00 Mi.	26,454	291,000	
13	Fort Wayne Lateral (10")	7.00 Mi.	23,757	166,300	
14	Kokomo-Tipton Lateral (8")	4.40 Mi.	23,182	102,000	
15	Greenfield Lateral (6")	5.80 Mi.	14,655	85,000	
16	Winchester Lateral (6")	3.30 Mi.	18,788	62,000	
17	Clinton Lateral (4")	8.80 Mi.	14,205	125,000	
18	Omit				
19	Arthur Lateral (4")	4.43 Mi.	13,476	59,700	
20	Villa Grove Lateral (4")	3.30 Mi.	13,697	45,200	
	Total Lateral Lines	106.33 Mi.			$3,500,200
	LATERAL MEASURING AND REGULATING STATION				
21	Anderson Lateral Measuring and Regulating Station	1 Ea.	34,650	34,650	$ 34,650
	Sub Total				$3,534,850
	Contingencies 3%				106,050
	Total Lateral System				$3,640,900

FEDERAL POWER COMMISSION
Docket No. G-[illegible]
Hearing Ex. No. 10
Date Identified 4/18/63
Date Admitted 4/18/63

(9427) Hearing Exhibit No. 10

604

PROJECT: Summary of Transmission System Construction Cost Estimate to Increase System Capacity

PAGE NO. 2 OF 3 SCHEDULE 1

9427

PANHANDLE EASTERN PIPE LINE COMPANY

CONSTRUCTION COST ESTIMATE

SCHEDULE NO. 11

DOCKET NO. G-2433

(9428)

ITEM NO.	ITEM	NUMBER & UNITS	UNIT COST	AMOUNT	TOTAL
1	RIGHT-OF-WAY ACQUISITION (Main Line)	17,504 Rd	$ 4.00	$ 70,016	$ 70,016
1a	RIGHT OF WAY ACQUISITION (River Crossings)	1,150 Rd	4.00	4,600	4,600
2	DAMAGES (Main Line)	17,504 Rd	6.00	105,024	105,024
2a	DAMAGES (River Crossings)	1,150 Rd	6.00	6,900	6,900
3	PRELIMINARY SURVEY (Main Line)	54.7 Mi	242.00	13,237	13,237
3a	PRELIMINARY SURVEY (River Crossings)	3.6 Mi	342.00	1,230	1,230
	MATERIALS				
4	Pipe 16" OD x 1/4" W.T.	6,194 T	162.50	1,006,525	
5	Casing 20" x 1/4" (Highways and Railroads)	60 T	162.50	9,750	
6	Valves, 16" Main Line	11 Ea	2,500.00	27,500	
7	Valves, 6" Main Line (By-pass, blow-off & Interconnections)	44 Ea	500.00	22,000	
8	Miscellaneous Fittings			16,705	
	Coating Material				
9.	Paint	766 T	65.00	49,790	
10	Primer	2,735 Ga	1.00	2,735	
11	Wrapper (8# Felt)	13,675 Sq	1.25	17,095	
	River Crossings				
12	Sangamon River (8,500')	8,500 Ft	15.30	130,050	
13	Salt Creek (7,100')	7,100 Ft	15.50	110,050	
14	Mackinaw River (3,400')	3,400 Ft	15.00	51,000	
	TOTAL MATERIALS				$ 1,443,200

PROJECT: Peoria Lateral consisting of the construction of approximately 54.7 miles of 16"x1/4" pipe line and three river crossings (3.6 mi.) in Illinois

PAGE NO. 1 OF 3 SCHEDULE 11

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9-28

PANHANDLE EASTERN PIPE LINE COMPANY

CONSTRUCTION COST ESTIMATE

SCHEDULE NO. 11 DOCKET NO. G-2433

ITEM NO.	ITEM	NUMBER & UNITS	UNIT COST	AMOUNT	TOTAL
	INSTALLATION COSTS				
	Contract				
15	Pipe Line Construction	288,816'	$ 2.14	$ 618,066	
16	Main Valve Settings	11Ea	1,600.00	17,600	
17	Main Line Interconnections	517'	10.00	5,170	
18	Highway & Railroad Crossings	2,200'	15.00	33,000	
	Company				
19	Purge, Test & Line Preparation	54.7Mi	185.00	10,119	
20	Field Engineering & Inspection (During Construction)	54.8Mi	410.00	22,427	
	River Crossings (Contract)				
21	Sangamon River	8,500'	7.06	60,000	
22	Salt Creek	7,100'	7.04	50,000	
23	Mackinaw River	3,400'	7.06	24,000	
	River Crossings (Company)				
24	Sangamon River			8,500	
25	Salt Creek			7,100	
26	Mackinaw River			3,400	
	TOTAL INSTALLATION COSTS				$ 859,382
	TOTAL DIRECT COSTS				$ 2,503,589

(9429)

909

PROJECT: Peoria Lateral, consisting of the construction of approximately 54.7 miles of 16"x1/4" pipe line and three river crossings (3.6 mi.) in Illinois.

245

PANHANDLE EASTERN PIPE LINE COMPANY

CONSTRUCTION COST ESTIMATE

SCHEDULE NO. 11

DOCKET NO. G-2433

ITEM NO.	ITEM	NUMBER & UNITS	UNIT COST	AMOUNT	TOTAL
	GENERAL OVERHEAD				
27	Administrative Expense (Main Line)			$ 7,029	$ 7,029
28	Administrative Expense (River Crossings)			3,117	3,117
29	Interest during Construction - 2%			50,265	50,265
	COST OF PROJECT				$ 2,564,000

PROJECT: Peoria Lateral consisting of the construction of approximately 54.7 miles of 16"x1/4" pipe line and three river crossings (3.6 mi.)in Illinois

PAGE NO. 3 OF 3 SCHEDULE 11

607

(9430)

S430

PANHANDLE EASTERN PIPE LINE COMPANY

CONSTRUCTION COST ESTIMATE

SCHEDULE NO. 12 DOCKET NO. G-2433

ITEM NO.	ITEM	NUMBER & UNITS	UNIT COST	AMOUNT	TOTAL
1	RIGHT-OF-WAY ACQUISITION	3,520 Rd	4.00	$ 14,080.00	14,080
2	DAMAGES	3,520 Rd	6.00	$ 21,120.00	21,120
3	PRELIMINARY SURVEY	11.0 Mi	242.00	2,662.00	2,662
	MATERIALS				
4	Pipe (Main Line) 10-3/4" OD x 1/4" W.T.	814 T	162.00	131,868.00	
5	Valves, 10" Main Line Gates	2 Ea	1,000.00	2,000.00	
6	Valves, 6" Main Line (By-pass & blow-off)	4 Ea	440.00	1,760.00	
7	Miscellaneous Fittings			2,886.00	
	Coating Material				
8	Paint	85 T	65.00	5,525.00	
9	Primer	330 Ga	1.00	330.00	
10	Wrapper (8# Felt)	1,804 Sq	1.25	2,255.00	
	TOTAL MATERIALS COST				$ 146,624

608

(9431)

PROJECT: Anderson Lateral consisting of the construction of approximately 11.0 miles of 10-3/4"x1/4" pipe line in Indiana.

PANHANDLE EASTERN PIPE LINE COMPANY

CONSTRUCTION COST ESTIMATE

SCHEDULE NO. 12

DOCKET NO. G-2433

ITEM NO.	ITEM	NUMBER & UNITS	UNIT COST	AMOUNT	TOTAL
	INSTALLATION COSTS				
	Contract				
11	Pipe Line Construction	58,080'	$ 1.54	$ 89,443	$
12	Valve Settings (Main Line)	2 Ea	1,000.00	2,000	
	Company				
13	Purge, Test and Line Preparation	11.0 Mi	185.00	2,035	
14	Field Engineering, Supervision & Inspection(during cons.)	11.0 Mi	410.00	4,510	
	TOTAL INSTALLATION COSTS				$ 107,988
	TOTAL DIRECT COSTS				$ 282,474
	GENERAL OVERHEAD				
15	Administrative			$ 2,824	$ 2,824
16	Interest during Construction - 2%			$ 5,702	$ 5,702
	TOTAL COST OF PROJECT				$ 291,000

PROJECT: Anderson Lateral consisting of the construction of approximately 11.0 miles of 10-3/4" x 1/4" Line in Indiana.

PAGE NO. 2 OF 2 SCHEDULE 12

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(9432)

S-32

PANHANDLE EASTERN PIPE LINE COMPANY

CONSTRUCTION COST ESTIMATE

SCHEDULE NO. 13

DOCKET NO. G-2433

ITEM NO.	ITEM	NUMBER & UNITS	UNIT COST	AMOUNT	TOTAL
1	RIGHT-OF-WAY ACQUISITION (Laid in old ditch, no new Right-of-Way needed)				
2	DAMAGES	2,240 Rd	$ 3.00	$ 6,720.00	$ 6,720
3	PRELIMINARY SURVEY	7.00 Mi	178.00	1,246.00	1,246
	MATERIALS				
4	Pipe (Main Line) 10-3/4" OD x 1/4" W.T.	518 T	154.00	79,772.00	
5	Casing (Railroads & Highway) 16" OD x 1/4" W.T.	1 T	155.00	155.00	
6	Valves Main Line (10")	2 Ea	650.00	1,300.00	
7	Valves, Main Line Gate (By-pass & Blow-offs 6")	3 Ea	315.00	945.00	
8	Miscellaneous Fittings, gaskets, bolts, etc.			2,373.00	
	Coating Material				
9	Paint	74 T	65.00	4,810.00	
10	Primer	210 Ga	1.00	210.00	
11	Wrapper (8# Felt)	1,148 Sq	1.25	1,435.00	
	TOTAL MATERIALS COSTS				$ 91,000

PROJECT: Ft. Wayne Lateral consisting of the construction of approximately 7.00 miles of 10-3/4" OD x 1/4" W.T. pipe line in Indiana.

610

(9433)

PANHANDLE EASTERN PIPE LINE COMPANY

CONSTRUCTION COST ESTIMATE

SCHEDULE NO. 13

DOCKET NO. G-2433

ITEM NO.	ITEM	NUMBER & UNITS	UNIT COST	AMOUNT	TOTAL
	INSTALLATION COSTS				
	Contract				
12	Pipe Line	36,960Ft	$ 1.54	$ 56,918.00	
13	Valve Settings	2Ea	300.00	600.00	
14	Highway and Railroad Crossings	50'	14.00	700.00	
	Company				
15	Purge, Test and Line Preparation	7.00Mi	175.00	1,225.00	
16	Field Engineering, Inspection & Supervision (During Construction)	7.00Mi	420.00	2,940.00	
	TOTAL INSTALLATION COSTS				$ 62,383
	TOTAL DIRECT COSTS				$ 161,349
	GENERAL OVERHEAD				
17	Administrative			1,611.00	1,611
18	Interest during Construction - 2%			3,340.00	3,340
	TOTAL COST OF PROJECT				$ 166,300

PROJECT: Ft. Wayne Lateral consisting of the construction of approximately 7.00 miles of 10-3/4" OD x 1/4" W.T. pipe line in Indiana.

PAGE NO. 2 OF 2 SCHEDULE 13

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(9433a)

9433a

PANHANDLE EASTERN PIPE LINE COMPANY

CONSTRUCTION COST ESTIMATE

SCHEDULE NO. 14

DOCKET NO. G-2433

ITEM NO.	ITEM	NUMBER & UNITS	UNIT COST	AMOUNT	TOTAL
1	RIGHT-OF-WAY ACQUISITION	1,408 Rd	$ 1.50	$ 2,112.00	$ 2,112
2	DAMAGES	1,408 Rd	6.00	8,448.00	8,448
3	PRELIMINARY SURVEY	4.4 Mi	242.00	1,065.00	1,065
	MATERIALS				
4	Pipe (Main Line) 8-5/8" OD x 1/4" W.T.	262 T	158.00	41,396.00	
5	Casing (Railroads & Highway) 12-3/4" OD x 1/4" W.T.	4 T	158.00	632.00	
6	Valves, Main Line 8"	1 Ea	465.00	465.00	
7	Valves, Blow-offs 4"	2 Ea	178.00	356.00	
8	Miscellaneous Fittings, gaskets, bolts, etc.			984.00	
	Coating Material				
9	Paint	31 T	65.00	2,015.00	
10	Primer	110 Ga	1.00	110.00	
11	Wrapper (8# Felt)	594 Sq	1.25	742.00	
	TOTAL MATERIALS COST				$ 46,700

(9434)

612

PROJECT: Kokomo-Tipton lateral consisting of the construction of approximately 4.4 miles of 8-5/8" OD x 1/4" W.T. pipe line in Indiana

PAGE NO. 1 OF 2 SCHEDULE 14

PANHANDLE EASTERN PIPE LINE COMPANY

CONSTRUCTION COST ESTIMATE

SCHEDULE NO. 14

DOCKET NO. G-2433

ITEM NO.	ITEM	NUMBER & UNITS	UNIT COST	AMOUNT	TOTAL
	INSTALLATION COSTS				
	Contract				
12	Pipe Line	23,200Ft	$ 1.50	$ 34,800.00	
13	Valve Setting	1Ea	400.00	400.00	
14	Highway & Railroad Crossings	250Ft	12.00	3,000.00	
	Company				
15	Purge, Test and Line Preparation	4.4 Mi	175.00	770.00	
16	Field Engineering & Inspection(During Construction)	4.4 Mi	410.00	1,804.00	
	TOTAL INSTALLATION COSTS				$ 40,774
	TOTAL DIRECT COSTS				$ 99,099
	GENERAL OVERHEAD				
17	Administrative			719.00	719
18	Interest during Construction - 2%			2,182.00	$ 2,182
	TOTAL COST OF PROJECT				$ 102,000

PROJECT: Kokomo-Tipton Lateral consisting of the construction of approximately 4.4 miles of 8-5/8" OD x 1/4" W.T. pipe line in Indiana.

PAGE NO. 2 OF 2 SCHEDULE 14

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(9435)

2435

PANHANDLE EASTERN PIPE LINE COMPANY

CONSTRUCTION COST ESTIMATE

SCHEDULE NO. 15 DOCKET NO. G-2433

ITEM NO.	ITEM	NUMBER & UNITS	UNIT COST	AMOUNT	TOTAL
1	RIGHT-OF-WAY ACQUISITION	1,885 Rd	$ 3.50	$ 6,493.00	$ 6,493
2	DAMAGES	1,855 Rd	3.50	6,493.00	6,493
3	PRELIMINARY SURVEY	5.8 Mi	242.00	1,404.00	1,404
	MATERIALS				
4	Pipe (Main Line) 6-5/8" OD x 3/16" W.T. (Reclaim)	30,600 Ft	.69	21,114.00	
5	Casing (Railroads & Highway) 10-3/4" OD x 1/4" W.T.	5 T	160.00	800.00	
6	Valves, Main Line 6"	2 Ea	500.00	1,000.00	
7	Valves, Blow-offs 2"	2 Ea	200.00	400.00	
8	Miscellaneous Fittings, gaskets, bolts, etc.			1,909.00	
	Coating Material				
9	Paint	35 T	65.00	2,275.00	
10	Primer	116 Ga	1.00	116.00	
11	Wrapper (8# Felt)	640 Sq	1.25	800.00	
	TOTAL MATERIALS COSTS				$ 28,414

PROJECT: Greenfield Lateral consisting of the construction of approximately 5.8 miles of 6-5/8" OD x 3/16" W.T. pipe line in Indiana

PAGE NO. 1 OF 2 SCHEDULE, 15

(9436)

614

PANHANDLE EASTERN PIPE LINE COMPANY

CONSTRUCTION COST ESTIMATE

SCHEDULE NO. 15

DOCKET NO. G-2433

ITEM NO.	ITEM	NUMBER & UNITS	UNIT COST	AMOUNT	TOTAL
	INSTALLATION COSTS				
	Contract				
12	Pipe Line	30,600 Ft	$ 1.06	$ 32,436.00	
13	Valve Settings	2 Ea	300.00	600.00	
14	Highway & Railroad Crossings	350 Ft	9.00	3,150.00	
	Company				
15	Purge, Test & Line Preparation	5.8 Mi	173.00	1,003.00	
16	Field Engineering & Inspection (During Construction)	5.8 Mi	431.00	2,500.00	
	TOTAL INSTALLATION COSTS				$ 39,689
	TOTAL DIRECT COSTS				$ 82,493
	GENERAL OVERHEAD				
17	Administrative			1,063.00	$ 1,063
18	Interest during Construction - 2%			1,444.00	1,444
	TOTAL COST OF PROJECT				$ 85,000

615

(9437)

PROJECT: Greenfield Lateral consisting of the construction of approximately 5.8 miles of 6-5/8" OD x 3/16" W.T. pipe line in Indiana.

PAGE NO. 2 OF 2 SCHEDULE 15

9437

PANHANDLE EASTERN PIPE LINE COMPANY

CONSTRUCTION COST ESTIMATE

SCHEDULE NO. 16

DOCKET NO. G-2433

ITEM NO.	ITEM	NUMBER & UNITS	UNIT COST	AMOUNT	TOTAL
	RIGHT-OF-WAY ACQUISITION	1,065 Rd	$ 3.00	$ 3,195.00	$ 3,195
2	DAMAGES	1,065 Rd	5.00	5,325.00	5,325
3	PRELIMINARY SURVEY	3.3 Mi	242.00	799.00	799
	MATERIALS				
4	Pipe (Main Line) 6-5/8" OD x 3/16" W.T.	84 T	161.00	13,524.00	
4a	Pipe (Main Line) 6-5/8" OD x 3/16" (Reclaim)	4,500 Ft	.69	3,105.00	
5	Valves, 6" Main Line Gate	1 Ea	300.00	300.00	
6	Miscellaneous Fittings			1,010.00	
	Coating Material				
7	Paint	20 T	65.00	1,300.00	
8	Primer	65 Ga	1.00	65.00	
9	Wrapper (8# Felt)	360 Sq	1.25	450.00	
	TOTAL MATERIALS COST				$ 19,754

PROJECT: Winchester Lateral consisting of the construction of approximately 3.3 miles of 6-5/8" O.D. x 3/16" Line in Indiana.

PAGE NO. 1 OF 2 SCHEDULE 16

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PANHANDLE EASTERN PIPE LINE COMPANY

CONSTRUCTION COST ESTIMATE

SCHEDULE NO. 16 DOCKET NO. G-2433

ITEM NO.	ITEM	NUMBER & UNITS	UNIT COST	AMOUNT	TOTAL
	INSTALLATION COSTS				
	Contract				
10	Pipe Line Construction	17,300 Ft	$ 1.36	$ 23,592.00	
11	Valve Setting (Main Line)	1 Ea	300.00	300.00	
12	Highway & Railroad Crossings	510 Ft	9.00	4,590.00	
	Company				
13	Purge, Test & Line Preparation	3.3 Mi	175.00	577.00	
14	Field Engineering & Inspection (During Construction)	3.3 Mi	550.00	1,815.00	
	TOTAL INSTALLATION COSTS				$ 30,874
	TOTAL DIRECT COSTS				$ 59,947
	GNEERAL OVERHEAD				
15	Administrative			736.00	$ 736
16	Interest during Construction - 2%			1,317.00	$ 1,317
	TOTAL COST OF PROJECT				$ 62,000

PROJECT: Winchester Lateral consisting of the construction of approximately 3.3 miles of 6-5/8" OD x 3/16" line in Indiana.

PAGE NO. 2 OF 2 SCHEDULE 16

617

(9439)

5439

PANHANDLE EASTERN PIPE LINE COMPANY

CONSTRUCTION COST ESTIMATE

SCHEDULE NO. 17

DOCKET NO. G-2433

ITEM NO.	ITEM	NUMBER & UNITS	UNIT COST	AMOUNT	TOTAL
1	RIGHT-OF-WAY ACQUISITION	2,816 Rd	$ 1.50	$ 4,224.00	$ 4,224
2	DAMAGES	2,816 Rd	5.00	$ 14,080.00	14,080
3	PRELIMINARY SURVEY	8.8 Mi	242.00	2,130.00	2,130
	MATERIALS				
4	Pipe (Main Line) 4-3/4" x .237" W.T.	251 T	167.00	41,917.00	
5	Casing - 8-5/8" OD x 1/4" W.T.	7 T	167.00	1,169.00	
6	Valves, 4" Main Line	2 Ea	178.00	356.00	
7	Valves, 2" Blow-off	2 Ea	155.00	310.00	
8	Miscellaneous Fittings			1,133.00	
	Coating Material				
9	Paint	35 T	66.00	2,310.00	
10	Primer	90 Ga	1.00	90.00	
11	Wrapper (8# Felt)	660 Sq	1.25	825.00	
	TOTAL MATERIALS COST				$ 48,110

(9440)

618

PROJECT: Clinton Lateral consisting of the construction of approximately 8.8 miles of 4-3/4" OD x .237" Line in Indiana.

PAGE NO. 1 OF 2 SCHEDULE 17

PANHANDLE EASTERN PIPE LINE COMPANY

CONSTRUCTION COST ESTIMATE

SCHEDULE NO. 17

DOCKET NO. G-2433

ITEM NO.	ITEM	NUMBER & UNITS	UNIT COST	AMOUNT	TOTAL
	INSTALLATION COSTS				
	Contract				
12	Pipe Line Construction	46,464 Ft	$ .94	$ 43,676.00	
13	Valve Settings (Main Line)	2 Ea	300.00	600.00	
14	Highway and Railroad Crossings	578 Ft	8.00	4,624.00	
	Company				
15	Purge, Test and Line Preparation	8.8 Mi	175.00	1,540.00	
16	Field Engineering & Inspection (During Construction)	8.8 Mi	275.00	2,420.00	
	TOTAL INSTALLATION COSTS				$ 52,860
	TOTAL DIRECT COSTS				$ 121,404
	GENERAL OVERHEAD				
17	Administrative			1,229.00	1,229
18	Interest during Construction - 2%			2,367.00	2,367
	TOTAL COST OF PROJECT				$ 125,000

619

(9441)

PROJECT: Clinton Lateral consisting of the construction of approximately 8.8 miles of 4-3/4" OD x .237" Line in Indiana.

PAGE NO. 2 OF 2 SCHEDULE 17

9441

PANHANDLE EASTERN PIPE LINE COMPANY

CONSTRUCTION COST ESTIMATE

SCHEDULE NO. 19

DOCKET NO. G-2433

ITEM NO.	ITEM	NUMBER & UNITS	UNIT COST	AMOUNT	TOTAL
1	RIGHT-OF-WAY ACQUISITION	1,414 Rd	$ 2.50	$ 3,535.00	$ 3,535
2	DAMAGES	1,414 Rd	3.00	$ 4,242.00	$ 4,242
3	PRELIMINARY SURVEY	4.43 Mi	242.00	$ 1,070.00	$ 1,070
	MATERIALS				
4	Pipe (4-1/2" OD x .237 W.T.)	125 T	167.00	21,042.00	
5	Valves, 4" Main Line	2 Ea	178.00	356.00	
6	Valves, 2" Blow-offs	2 Ea	155.00	310.00	
7	Miscellaneous Fittings			1,078.00	
	Coating Materials				
8	Paint	16 T	66.00	1,056.00	
9	Primer	45 Ga	1.00	45.00	
10	Felt (8# Outerwrap)	330 Sq	1.25	413.00	
	TOTAL MATERIALS COST				$ 24,300
	INSTALLATION COSTS				
	Contract				
11	Pipe Line Construction	23,385 Ft	.95	22,126.00	
12	Valve Settings	2 Ea	300.00	600.00	
13	Highway & Railroad Crossings	NONE			
	Company				
14	Purge, Test and Line Preparation	4.43 Mi	175.00	775.00	
15	Field Engineering & Inspection (During Construction)	4.43 Mi	275.00	1,218.00	
	TOTAL INSTALLATION COSTS				$ 24,719
	TOTAL DIRECT COSTS				$ 57,866

PROJECT: Arthur Lateral consisting of the construction of approximately 4.43 miles of 4-1/2" OD x .237" Line in Illinois

(9442)

620

PANHANDLE EASTERN PIPE LINE COMPANY
CONSTRUCTION COST ESTIMATE

SCHEDULE NO. 19

DOCKET NO. G-2433

ITEM NO.	ITEM	NUMBER & UNITS	UNIT COST	AMOUNT	TOTAL
	GENERAL OVERHEAD				
16	Administrative			$ 634.00	$ 634
17	Interest during Construction - 2%			$ 1,200.00	$ 1,200
	TOTAL COST OF PROJECT				$ 59,700

PROJECT: Arthur Lateral consisting of the construction of approximately 4.43 miles of 4-1/2" OD x .237" line in Illinois.

PAGE NO. 2 OF 2 SCHEDULE 19

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(9443)

9443

PANHANDLE EASTERN PIPE LINE COMPANY

CONSTRUCTION COST ESTIMATE

SCHEDULE NO. 20

DOCKET NO. G-2433

ITEM NO.	ITEM	NUMBER & UNITS	UNIT COST	AMOUNT	TOTAL
1	RIGHT-OF-WAY ACQUISITION	1,055 Rd	$ 2.50	$ 2,637.00	$ 2,637
2	DAMAGES	1,055 Rd	3.00	$ 3,165.00	$ 3,165
3	PRELIMINARY SURVEY	3.3 Mi	242.00	$ 798.00	$ 798
	MATERIALS				
4	Pipe (4-1/2" OD x .237" W.T.)	94 T	167.00	15,698.00	
5	Valves (4" Main Line)	2 Ea	178.00	356.00	
6	Valves (2" Blow-off)	2 Ea	155.00	310.00	
7	Miscellaneous Fittings			1,076.00	
	Coating Materials				
8	Paint	11 T	66.00	726.00	
9	Primer	33 Ga	1.00	33.00	
10	Felt (8# Outerwrap)	241 Sq	1.25	301.00	
	TOTAL MATERIALS COST				$ 18,500

(9444)

622

PROJECT: Villa Grove Lateral consisting of the construction of approximately 3.3 miles of 4-1/2" OD x .237" Line in Illinois.

PAGE NO. 1 OF 2 SCHEDULE 20

9444

PANHANDLE EASTERN PIPE LINE COMPANY

CONSTRUCTION COST ESTIMATE

SCHEDULE NO. 20 DOCKET NO. G-2433

ITEM NO.	ITEM	NUMBER & UNITS	UNIT COST	AMOUNT	TOTAL
	INSTALLATION COSTS				
	Contract				
11	Pipe Line Construction	17,356 Ft	$ .95	$ 16,488.00	$
12	Valve Settings	2 Ea	300.00	600.00	
13	Highway & Railroad Crossings	NONE			
	Company				
14	Purge, Test & Line Preparation	3.3 Mi	175.00	578.00	
15	Field Engineering & Inspection (During Construction)	3.3 Mi	275.00	908.00	
	TOTAL INSTALLATION COST				$ 18,574
	TOTAL DIRECT COSTS				$ 43,674
	GENERAL OVERHEAD				
16	Administrative			$ 626.00	$ 626
17	Interest during Construction -- 2%			$ 900.00	$ 900
	TOTAL COST OF PROJECT				$ 45,200

PROJECT: Villa Grove Lateral consisting of the construction of approximately 3.3 miles of 4-1/2" OD x .237" Line in Illinois.

PAGE NO. 2 OF 2 SCHEDULE 20

623

(9445)

PANHANDLE EASTERN PIPE LINE COMPANY

CONSTRUCTION COST ESTIMATE

SCHEDULE NO. 21

DOCKET NO. G-2433

ITEM NO.	ITEM	QUANTITY	MATERIAL		INSTALLATION	TOTAL
			UNIT COST	AMOUNT		
1	LAND	0.5 Acre				$ 250
	MEASURING AND REGULATING BUILDING					
2	Measuring and Regulating Equipment - meters, regulators, pipe, valves, fittings, etc.	1 Lot	$18,300	$18,300	$ 8,500	
3	Building - superstructure, foundations, lighting, etc.	1 Each	1,600	1,600	500	
	SITE IMPROVEMENT					
4	Grading, fencing, roads, walks and curbs.	1 Lot	550	550	1,050	
	Sub Total			$20,450	$10,050	30,500
	Total Land, Material and Labor					$30,750
5	FIELD ENGINEERING AND INSPECTION				2,250	2,250
	Total Direct Costs					$33,000
6	ADMINISTRATIVE, ENGINEERING, SUPERVISION, 2½%					825
7	INTEREST DURING CONSTRUCTION, 2½%					825
	Total Cost of Project					$34,650

PROJECT: Construction of Central-Anderson, Indiana
Measuring and Regulating Station #2

PAGE NO. 1 OF 1 SCHEDULE 21

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(9446)

PANHANDLE EASTERN PIPE LINE COMPANY

CONSTRUCTION COST ESTIMATE

SCHEDULE NO. 21

DOCKET NO. G-2433

ITEM NO.	ITEM	QUANTITY	MATERIAL		INSTALLATION	TOTAL
			UNIT COST	AMOUNT		
1	LAND	0.5 Acre				$ 250
	MEASURING AND REGULATING BUILDING					
2	Measuring and Regulating Equipment - meters, regulators, pipe, valves, fittings, etc.	1 Lot	$18,300	$18,300	$ 8,500	
3	Building - superstructure, foundations, lighting, etc.	1 Each	1,600	1,600	500	
	SITE IMPROVEMENT					
4	Grading, fencing, roads, walks and curbs.	1 Lot	550	550	1,050	
	Sub Total			$20,450	$10,050	30,500
	Total Land, Material and Labor					$30,750
5	FIELD ENGINEERING AND INSPECTION				2,250	2,250
	Total Direct Costs					$33,000
6	ADMINISTRATIVE, ENGINEERING, SUPERVISION, 2½%					825
7	INTEREST DURING CONSTRUCTION, 2½%					825
	Total Cost of Project					$34,650

PROJECT: Construction of Central-Anderson, Indiana
Measuring and Regulating Station #2

PAGE NO. 1 OF 1 SCHEDULE 21

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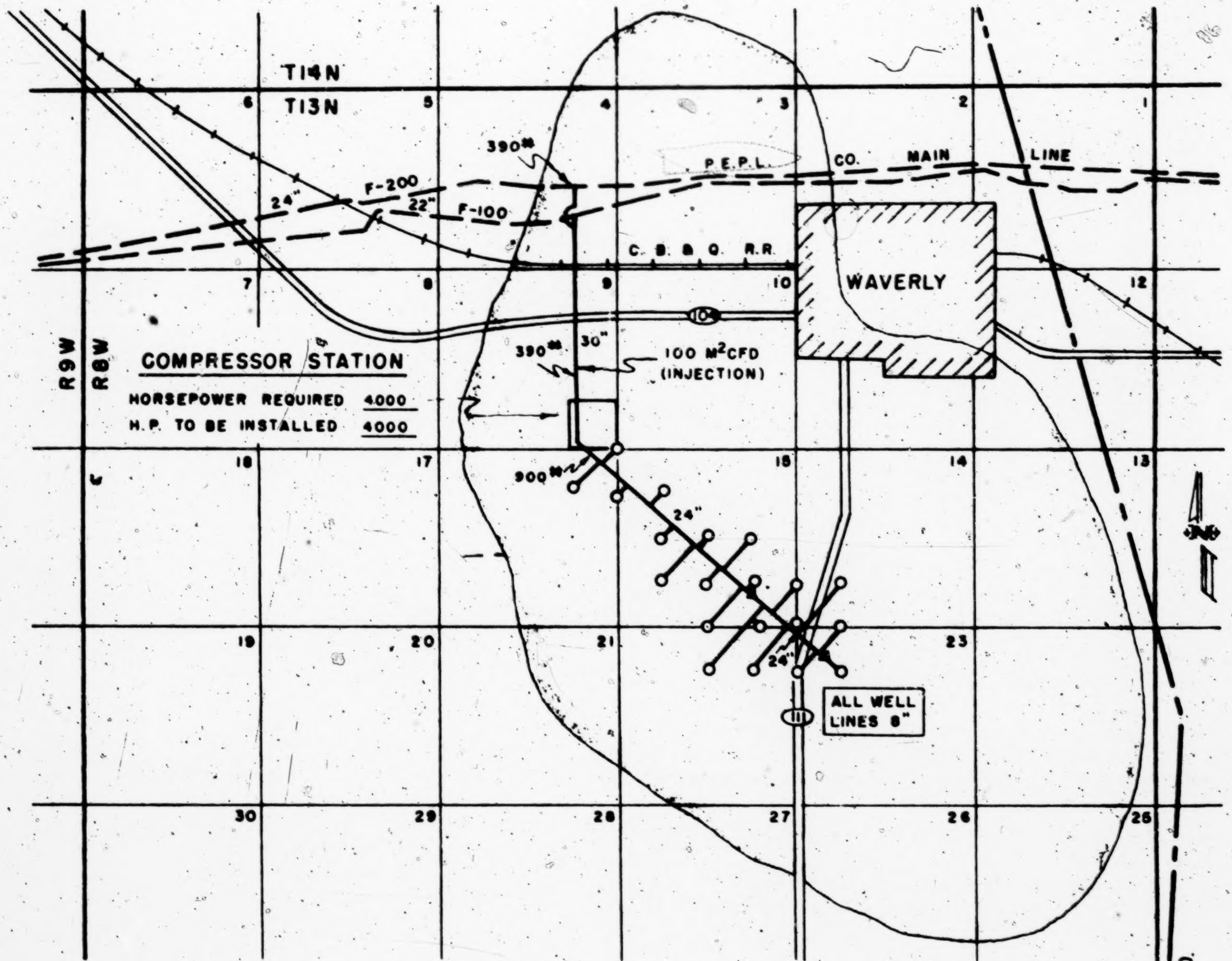
(9447)

DOCKET G2433
EXHIBIT



PANHANDLE EASTERN PIPE LINE COMPANY

Tabulation of Contract Demands for the
Period Commencing November 1, 1955

	November thru March	April	May	June	July	August	September	October	Present Contract Demands November thru March
General Service Rate G-1									
Indiana									
Central Indiana Gas Company	100 000	96 000	85 000	68 000	58 000	62 000	83 000	88 000	85 000
Greenfield Gas Company, Inc.	5 500	3 500	2 500	1 500	700	800	2 500	3 500	3 775
Indiana Gas Distribution Corporation	7 600	4 200	3 000	1 400	600	700	2 200	3 800	4 850
Indiana Gas & Water Company, Inc.	55 000	33 600	27 300	19 000	17 600	19 250	28 900	33 000	45 000
Indianapolis, City of	50 000	38 000	30 000	20 000	18 000	18 000	23 000	28 000	30 000
Kokomo Gas & Fuel Company	25 000	22 000	18 000	13 000	12 500	12 500	15 000	22 000	17 000
Northern Indiana Fuel & Light Company	4 000	2 700	2 200	1 600	1 600	1 600	2 000	3 000	-
Northern Indiana Public Service Company	51 000	36 000	27 000	21 000	15 000	15 000	25 000	34 000	45 000
Ohio Valley Gas Corporation	6 000	3 000	2 300	1 400	1 100	1 200	2 300	3 000	3 200
Richmond Gas Corporation	10 000	6 700	4 800	3 000	3 000	3 000	4 600	6 300	8 200
Ohio									
Ohio Gas Company	15 200	10 500	8 500	6 500	3 200	3 200	7 900	9 800	12 200
Toledo Edison Company, The	4 700	2 800	2 200	1 800	1 800	1 600	2 000	2 600	3 000
Michigan									
Albion Gas Light Company, The	Included in Southeastern Michigan Gas Company.								
Battle Creek Gas Company	20 000	12 000	10 000	8 000	8 000	8 000	10 000	12 000	15 000
Citizens Gas Fuel Company	6 300	5 500	4 500	3 700	3 200	3 300	4 100	5 100	4 300
Michigan Gas Utilities Company	16 000	9 000	7 700	7 700	7 700	7 700	7 700	9 000	11 000
Southeastern Michigan Gas Company	20 000	11 600	9 100	5 200	~~5 000~~ 4 700	4 700	6 500	9 200	16 200
Total General Service Rate G-1 (Excluding Michigan Gas Storage Company)	396 300	297 100	244 100	182 800	~~157 000~~ 156 700	162 550	226 700	272 300	303 725
General Service Rate G-2									
Missouri									
Central West Utility Company, The	7 500	6 500	4 500	2 000	1 700	1 700	2 400	4 300	10 000
Citizens Gas Company of Hannibal	12 000	8 000	5 000	2 000	1 800	1 800	3 100	7 900	10 000
Fulton, City of	6 500	3 700	2 400	700	600	600	1 600	3 700	4 800
Gas Service Company, The (Excluding Louisburg Lateral)	11 695	7 655	3 844	2 345	1 305	1 305	1 997	3 730	11 695
Missouri Edison Company	3 600	2 200	1 500	900	700	700	1 300	2 200	3 500
Missouri Power & Light Company	45 000	24 000	15 000	8 300	8 000	7 500	9 900	22 000	39 000
Missouri Utilities Company	17 500	10 000	7 000	3 500	2 000	2 000	3 500	7 500	15 000
Missouri Western Gas Company	3 100	2 200	1 500	1 100	1 100	1 100	1 500	2 300	2 785
Illinois									
Central Illinois Electric & Gas Company	7 100	5 200	4 000	2 400	2 400	2 400	2 700	4 800	6 050
Central Illinois Light Company	150 000	125 000	95 000	45 000	45 000	45 000	90 000	120 000	99 900
Central Illinois Public Service Company	50 000	37 000	28 400	20 000	12 000	12 000	26 700	36 000	37 800
Citizens Gas Company	9 000	5 200	3 700	1 500	1 000	1 000	3 200	5 000	6 300
Illinois Power Company	97 000	50 000	40 000	30 000	22 000	22 000	41 000	62 000	67 000
Morton Municipal Gas Company	3 000	1 900	1 390	500	500	550	1 175	1 550	1 975
Pittsfield, City of	2 900	1 800	1 200	600	500	500	700	1 300	1 975
Total General Service Rate G-2	425 895	290 355	214 434	120 845	100 605	100 155	190 772	284 280	317 780

Exhibit No. 2
Schedule No. 2
F.P.C. Docket No. G-2433
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PANHANDLE EASTERN PIPE LINE COMPANY

Tabulation of Contract Demands for the Period Commencing November 1, 1955

	November thru March	April	May	June	July	August	September	October	Present Contract Demands November thru March
General Service Rate G-3									
Kansas									
Gas Service Company, The	11 979	7 880	4 035	2 565	1 548	1 563	2 238	3 974	11 979
Total General Service (Excluding Michigan Gas Storage Company)	834 174	595 335	462 569	306 210	259 353	264 268	419 710	560 554	633 484
Small General Service Rate SG-1									
Indiana									
Indiana Gas Distribution Corp. - Rurals	1 600	1 600	1 600	1 600	1 600	1 600	1 600	1 600	1 100
Lapel, Town of	1 000	1 000	1 000	1 000	1 000	1 000	1 000	1 000	600
Montezuma, Town of	1 500	1 500	1 500	1 500	1 500	1 500	1 500	1 500	600
Pendleton Natural Gas Company	1 975	1 975	1 975	1 975	1 975	1 975	1 975	1 975	1 600
Pittsboro, Town of	400	400	400	400	400	400	400	400	350
Roachdale, Town of	600	600	600	600	600	600	600	600	500
Ohio									
Central States Natural Gas Company, Inc.	1 999	1 999	1 999	1 999	1 999	1 999	1 999	1 999	1 500
Dayton Power & Light Company, The	900	900	900	900	900	900	900	900	750
Ohio Fuel Gas Company, The - Rurals	100	100	100	100	100	100	100	100	100
Total Small General Service Rate SG-1	10 074	10 074	10 074	10 074	10 074	10 074	10 074	10 074	7 100
Small General Service Rate SG-2									
Missouri									
Bowling Green Gas Company	1 999	1 999	1 999	1 999	1 999	1 999	1 999	1 999	1 999
Missouri Central Natural Gas Company	1 536	1 536	1 536	1 536	1 536	1 536	1 536	1 536	-
Illinois									
Auburn, City of	1 000	1 000	1 000	1 000	1 000	1 000	1 000	1 000	-
Roodhouse, City of	1 900	1 900	1 900	1 900	1 900	1 900	1 900	1 900	1 900
Town Gas Company - 3 Towns	1 999	1 999	1 999	1 999	1 999	1 999	1 999	1 999	-
Town Gas Company - Rurals	1 000	1 000	1 000	1 000	1 000	1 000	1 000	1 000	-
White Hall, City of	1 900	1 900	1 900	1 900	1 900	1 900	1 900	1 900	1 900
Total Small General Service Rate SG-2	11 334	11 334	11 334	11 334	11 334	11 334	11 334	11 334	5 799
Small General Service Rate SG-3									
Kansas									
American Gas Company, The	1 675	1 675	1 675	1 675	1 675	1 675	1 675	1 675	1 675
Louisburg Gas Company	750	750	750	750	750	750	750	750	750
Miami Pipe Line Company, The	1 950	1 950	1 950	1 950	1 950	1 950	1 950	1 950	1 950
Total Small General Service Rate SG-3	4 375	4 375	4 375	4 375	4 375	4 375	4 375	4 375	4 375
Total Small General Service	25 783	25 783	25 783	25 783	25 783	25 783	25 783	25 783	17 274
Total General Service and Small General Service (Excluding Michigan Gas Storage Company)	859 957	621 118	488 352	331 993	285 136	290 051	445 493	586 337	650 758
Limited Service Customers									
East Ohio Gas Company, The	185 000	185 000	185 000	185 000	185 000	185 000	185 000	185 000	85 000
Michigan Consolidated Gas Company	87 500	87 500	87 500	87 500	87 500	87 500	87 500	87 500	127 000(a)
Ohio Fuel Gas Company, The	100 000	100 000	100 000	100 000	100 000	100 000	100 000	100 000	50 000
Texas Gas Transmission Corporation	-	-	-	-	-	-	-	-	18 000(a)
Total Limited Service	372 500	372 500	372 500	372 500	372 500	372 500	372 500	372 500	280 000
Michigan Gas Storage Company	120 000	110 000	60 000	60 000	60 000	60 000	60 000	110 000	60 000
Total Contract Demands	1 352 457	1 103 618	920 852	764 493	717 636	722 551	877 993	1 068 837	990 758

Note: (a) Obligation presently imposed by the F.P.C. under Commission's order issued March 5, 1952.

Exhibit No. _____
Schedule No. 2
Page 7

FEDERAL POWER COMMISSION

Docket No. G-1705, et al

Hearing Ex. No. 27-A

Date Identified 7/14/55

Date Admitted 10/7/55

Hearing Exhibit No. 27A

(9509)

PANHANDLE EASTERN PIPE LINE COMPANY

Tabulation of Contract Demands for the Period Commencing December 1, 1955

	November thru March	April	May	June	July	August	September	October	Source
General Service Rate G-1									
Indiana									
Central Indiana Gas Company	104 000	80 000	70 000	60 000	55 000	60 000	71 000	80 000	1955 Letter Agreement
Greenfield Gas Company, Inc.	5 500	3 500	2 500	1 500	700	800	2 500	3 500	Exhibit No. 27
Indiana Gas Distribution Corporation	7 600	4 200	3 000	1 400	600	700	2 200	3 800	Exhibit No. 27
Indiana Gas & Water Company, Inc.	52 500	35 100	30 000	25 000	19 000	20 000	30 000	36 000	1955 Letter Agreement
Indianapolis, City of	44 000	38 000	32 000	25 000	18 000	19 000	28 000	35 000	1955 Letter Agreement
Kokomo Gas & Fuel Company	23 000	18 500	16 000	14 000	13 000	13 000	14 500	17 500	1955 Letter Agreement
Northern Indiana Fuel & Light Company	4 000	2 700	2 200	1 600	1 600	1 600	2 000	3 000	Exhibit No. 27
Northern Indiana Public Service Co.	50 000	33 000	25 500	21 000	15 000	15 000	24 000	32 000	1955 Letter Agreement
Ohio Valley Gas Corporation	6 000	3 000	2 300	1 400	1 100	1 200	2 300	3 000	Exhibit No. 27
Richmond Gas Corporation	10 000	6 700	4 800	3 000	3 000	3 000	4 500	6 300	Exhibit No. 27
Ohio									
Ohio Gas Company	15 000	10 000	8 000	6 000	3 200	3 200	7 200	9 800	1955 Letter Agreement
Toledo Edison Company, The	4 700	2 800	2 200	1 800	1 800	1 600	2 000	2 600	Exhibit No. 27
Michigan									
Battle Creek Gas Company	15 000	13 000	11 000	10 500	10 500	10 500	11 000	13 000	1955 Letter Agreement
Citizens Gas Fuel Company	6 300	5 500	4 500	3 700	3 200	3 300	4 100	5 100	Exhibit No. 27
Michigan Gas Storage Company	85 000	75 000	25 000	25 000	25 000	25 000	25 000	75 000	1955 Letter Agreement
Michigan Gas Utilities Company	14 500	11 500	12 000	9 500	9 500	9 500	12 000	11 500	1955 Letter Agreement
Southeastern Michigan Gas Company	19 000	11 600	9 100	5 200	4 700	4 700	6 500	9 200	1955 Letter Agreement
Total General Service Rate G-1	470 100	354 100	260 100	215 600	184 900	192 100	248 900	346 300	
General Service Rate G-2									
Missouri									
Central West Utility Company, The	5 540(a)	6 500	4 500	2 000	1 700	1 700	2 400	4 300	Exhibit No. 27 Apr. thru Oct.
Citizens Gas Company of Hannibal	12 000	8 000	5 000	2 000	1 800	1 800	3 100	7 900	Exhibit No. 27
Fulton, City of	6 500	3 700	2 400	700	600	600	1 600	3 700	Exhibit No. 27
Gas Service Company, The (a)	26 875	18 950	9 805	6 048	3 444	3 444	5 179	9 513	Exhibit No. 27 Apr. thru Oct.
Missouri Edison Company	3 600	2 200	1 500	900	700	700	1 300	2 200	Exhibit No. 27
Missouri Power & Light Company	43 000	24 000	17 500	8 300	8 000	7 500	9 900	22 000	1955 Letter Agreement
Missouri Utilities Company	17 500	10 000	7 000	3 500	2 000	2 000	3 500	7 500	Exhibit No. 27
Missouri Western Gas Company	3 100	2 200	1 500	1 100	1 100	1 100	1 500	2 300	Exhibit No. 27
Illinois									
Central Illinois Electric & Gas Co.	7 100	5 200	4 000	2 400	2 400	2 400	2 700	4 300	Exhibit No. 27
Central Illinois Light Company	122 000	100 000	80 000	55 000	52 000	52 000	70 000	95 000	1955 Letter Agreement
Central Illinois Public Service Co.	47 000	34 000	25 000	19 000	11 500	11 500	24 000	31 000	1955 Letter Agreement
Citizens Gas Company	9 000	5 200	3 700	1 500	1 000	1 000	3 200	5 000	Exhibit No. 27
Illinois Power Company	88 000	48 000	38 000	30 000	22 000	22 000	35 000	50 000	1955 Letter Agreement
Morton Municipal Gas Company	3 000	1 900	1 390	500	500	550	1 175	1 550	Exhibit No. 27
Pittsfield, City of	2 900	1 800	1 200	600	500	500	700	1 300	Exhibit No. 27
Total General Service Rate G-2	397 115	271 550	202 495	133 548	109 244	108 794	165 254	248 063	

Exhibit No. ____
F.P.C. Docket No. G-2433, G-8665 et al
Witness ____
Page 1 of 2

9509

PANHANDLE EASTERN PIPE LINE COMPANY

Tabulation of Contract Demands for the Period Commencing December 1, 1955

(9510)

	November thru March	April	May	June	July	August	September	October	Source
General Service Rate G-3									
Kansas									
Gas Service Company, The (a)	11 979	7 880	4 035	2 565	1 548	1 563	2 238	3 97-	Exhibit No. 27
Total General Service	879 194	633 630	466 630	351 713	295 692	302 457	-15 362	503 33-	
Small General Service Rate SG-1									
Indiana									
Indiana Gas Distribution Corp. - Rurals	1 600	1 600	1 600	1 600	1 600	1 600	1 600	1 600	Exhibit No. 27
Lapel, Town of	1 000	1 000	1 000	1 000	1 000	1 000	1 000	1 000	Exhibit No. 27
Montezuma, Town of	1 500	1 500	1 500	1 500	1 500	1 500	1 500	1 500	Exhibit No. 27
Pendleton Natural Gas Company.	1 975	1 975	1 975	1 975	1 975	1 975	1 975	1 975	Exhibit No. 27
Pittsboro, Town of	400	400	400	400	400	400	400	400	Exhibit No. 27
Roachdale, Town of	500	600	600	600	600	600	600	600	Exhibit No. 27
Ohio									
Central States Natural Gas Co., Inc.	1 999	1 999	1 999	1 999	1 999	1 999	1 999	1 999	Exhibit No. 27
Dayton Power & Light Company, The	900	900	900	900	900	900	900	900	Exhibit No. 27
Ohio Fuel Gas Company, The - Rurals	100	100	100	100	100	100	100	100	Exhibit No. 27
Total Small General Service Rate SG-1	10 974	10 974	10 974	10 974	10 974	10 974	10 974	10 974	
Small General Service Rate SG-2									
Missouri									
Bowling Green Gas Company	1 999	1 999	1 999	1 999	1 999	1 999	1 999	1 999	Exhibit No. 27
Illinois									
Auburn, City of	1 000	1 000	1 000	1 000	1 000	1 000	1 000	1 000	Exhibit No. 27
Roodhouse, City of	1 900	1 900	1 900	1 900	1 900	1 900	1 900	1 900	Exhibit No. 27
Town Gas Company - Rurals	1 000	1 000	1 000	1 000	1 000	1 000	1 000	1 000	
White Hall, City of	1 900	1 900	1 900	1 900	1 900	1 900	1 900	1 900	Exhibit No. 27
Total Small General Service Rate SG-2	7 799	7 799	7 799	7 799	7 799	7 799	7 799	7 799	
Small General Service Rate SG-3									
Kansas									
American Gas Company, The	1 675	1 675	1 675	1 675	1 675	1 675	1 675	1 675	Exhibit No. 27
Louisburg Gas Company	550(a)	750	750	750	750	750	750	750	Exhibit No. 27 Apr. thru Oct.
Miami Pipe Line Company, The	1 950	1 950	1 950	1 950	1 950	1 950	1 950	1 950	Exhibit No. 27
Total Small General Service Rate SG-3	4 175	4 375	4 375	4 375	4 375	4 375	4 375	4 375	
Total Small General Service	22 048	22 248	22 248	22 248	22 248	22 248	22 248	22 248	
Total General Service & Small General Service	901 242	655 878	488 878	373 961	317 940	324 705	433 640	520 585	
Limited Service Rate LS-1									
East Ohio Gas Company, The	120 000	120 000	120 000	120 000	120 000	120 000	120 000	120 000	1955 Letter Agreement
Michigan Consolidated Gas Company (a)	127 000	127 000	127 000	127 000	127 000	127 000	127 000	127 000	Imposed by the F.P.C.
Ohio Fuel Gas Company, The	70 000	70 000	70 000	70 000	70 000	70 000	70 000	70 000	1955 Letter Agreement
Total Limited Service Rate LS-1	317 000	317 000	317 000	317 000	317 000	317 000	317 000	317 000	
7(a) Applicants	14 000	8 000	6 000	4 000	4 000	4 000	5 000	8 000	Estimated by P.E.P.L. Co.
Total Contract Demands	1 232 242	980 878	811 878	694 961	638 940	645 705	760 640	845 585	

Note: (a) Obligation presently imposed by the F.P.C.

Exhibit No. 27
Page 2 of 2

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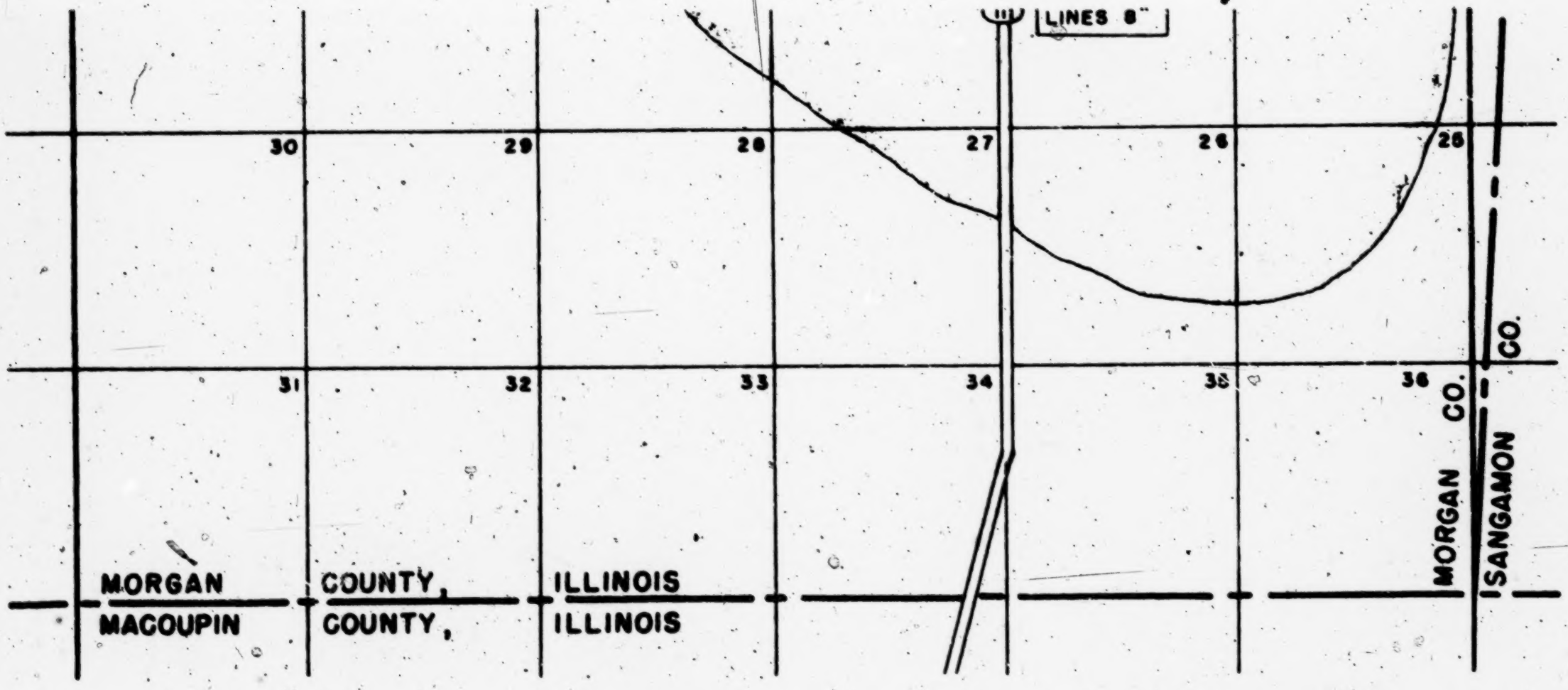

——— PRESENT FACILITIES

——— PROPOSED FACILITIES

FEDERAL POWER COMMISSION

Docket No. ----------

Hearing Ex. No. ----------

Date Identified ----------

Date Admitted ----------

Revised 12/20/54 RL

PANHANDLE EASTERN PIPE LINE CO.	
PROPOSED FACILITIES WAVERLY STORAGE FIELD	
DATE 2-3-54	SCALE 1" = 1 MILE
DRAWN BY R. C. C.	APPROVED
CHECKED BY Kennedy	BOOK NO.
APPROVED L. E. H.	DRWG. NO. 11448

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Hearing Exhibit No. 58

AGREEMENT

PANHANDLE EASTERN PIPE LINE COMPANY AND
UNION GAS COMPANY OF CANADA, LIMITED

* * * * * * * * * * * *

This Agreement made as of this 21st day of April, 1954, between Panhandle Eastern Pipe Line Company, a Delaware corporation (herein called "Panhandle"), and Union Gas Company of Canada, Limited, an Ontario corporation (herein called "Union"),

WITNESSETH:

ARTICLE I

Definitions

1. The word "day" shall mean a period of 24 consecutive hours beginning and ending at 7:00 o'clock a. m., Eastern Standard Time.

2. The word "month" shall mean a period beginning at 7:00 o'clock a. m., Eastern Standard Time, on the first day of a calendar month and ending at 7:00 o'clock a. m., Eastern Standard Time, on the first day of the following calendar month.

3. The word "gas" shall mean natural gas of the quality specified in Article VIII hereof.

4. The phrase "day of first regular delivery" shall mean the day designated in a notice given pursuant to Article III, Section 2(e) as the day for the first regular delivery of gas hereunder.

ARTICLE II

Representations

1. Panhandle owns and operates a gas transmission pipe line extending from Texas to a point on the international boundary between the

United States and Canada where it connects with a pipe line owned and operated by Union.

2. Panhandle warrants generally the title to all gas to be delivered hereunder and its right to sell such gas. It also warrants that such gas shall be free and clear from all liens and adverse claims.

3. Union owns and operates a gas production, transmission, storage and distribution system in the Province of Ontario, Canada, which connects with Panhandle's pipe line at the aforesaid international boundary. It proposes to cause a pipe line to be constructed connecting with its present system and running to a point in the vicinity of Hamilton, Ontario, Canada, with appropriate lateral lines and connections running into various markets along the way. The proposed pipe line will be operated in conjunction with Union's storage fields so as to facilitate high load factors and the sale of gas for high priority uses.

4. The parties hereto entered into a contract under date of November 25, 1944, for the purchase and sale of volumes of gas up to 5,500,000 Mcf annually, pursuant to which, deliveries of gas are currently being made and a subsequent contract between the parties, under date of March 15, 1950, as modified, providing for increased deliveries of gas, has not become effective.

5. It is the intention of the parties that the aforesaid contract dated November 25, 1944, continue in full force

and effect, that the aforesaid contract dated March 15, 1950, be cancelled and that a new contract be entered into for the purchase and sale of additional volumes of gas over and above the volumes provided for

under the aforesaid November 25, 1944, contract.

ARTICLE III

Sale and Delivery

1. In reliance upon the foregoing representations and in consideration of the mutual covenants herein contained, Panhandle agrees to sell and deliver gas to Union for resale, for storage, or for any use whatever by Union, and Union agrees to purchase and receive gas from Panhandle subject, in each case, to all the terms and conditions hereof.

2. Panhandle shall begin regular deliveries to Union upon the happening of all the following events:

(a) Final approval of this Agreement by the Federal Power Commission or any governmental authority of the United States or Canada having jurisdiction, and the issuance by such Commission or authority of all export or import licenses or permits of any nature which are requisite to the performance of this Agreement.

(b) The acceptance by both Panhandle and Union of any conditions imposed by the Federal Power Commission or any other governmental authority on the performance of this Agreement, such acceptance to be evidenced by notices given by each party to the other within 90 days from the entry of the order imposing such conditions.

(c) The receipt of all other governmental approvals which, in the opinion of counsel for Panhandle and

counsel for Union, are required for the performance of this Agreement.

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(d) The receipt by Panhandle of written notice from Union stating that Union is ready to accept regular delivery of gas hereunder, which notice shall be given within 18 months after the happening of the events specified in sub-sections (a), (b) and (c) above. During such 18-months' period, the parties shall construct all necessary facilities and prepare for the delivery and acceptance of gas hereunder.

(e) The subsequent receipt by Union of a written notice from Panhandle specifying the day of first regular delivery of gas hereunder, which day shall be not more than 60 days after the day upon which Panhandle receives the notice from Union specified in sub-section (d).

The obligations of Panhandle to deliver and of Union to receive gas hereunder are expressly conditioned upon the happening of all the above events, and Union shall have no obligation to construct a pipe line or make any other preparations to take delivery of gas hereunder until after the occurrence of the events specified in sub-sections (a), (b) and (c).

Article IV

Term

The term of this Agreement shall be for a period of twenty years from the day of the first regular delivery of gas hereunder. In the event that Union (or any company of which Union owns a majority of the voting stock) enters into a contract with Trans-Canada Pipe Lines, Limited (or any other company which may be authorized by the

Canadian Government to transport natural gas from the Province of Alberta to eastern Canada), for the purchase of a supply of gas

substantially as great as or greater than the volumes purchased hereunder, Union shall have the right to cancel and terminate this Agreement upon one years written notice to Panhandle, given not earlier than one year after the day of first regular delivery hereunder. The right of termination provided for in this Article must be exercised within one year following the commencement of delivery of natural gas to the Toronto, Ontario, area by the proposed pipe line from Alberta to eastern Canada and in no event later than November 1, 1960.

ARTICLE V

Quantity and Rate of Delivery

1. The base annual volume of gas deliverable hereunder shall be 15,500,000 Mcf. Subject to the provisions of Sections 3, 4 and 5 of this Article, Panhandle shall be obligated to deliver said base volume during the entire term of this Agreement, except that during the first five years following the day of the first regular delivery Panhandle shall be obligated to deliver only the following annual volumes:

First year	10,500,000 Mcf
Second year	11,500,000 Mcf
Third year	12,500,000 Mcf
Fourth year	13,500,000 Mcf
Fifth year	14,500,000 Mcf

The aforesaid volumes of gas to be delivered hereunder are in addition to the volumes to be delivered under the contract between the parties dated November 25, 1944. During the period April through October in each year (for the remaining period of the term of the November

25, 1944 Contract between the parties), the first 785,715 Mcf of gas delivered by Panhandle to Union in

each month (up to a total of 5,500,000 Mcf of gas in any year) shall be considered to be delivered under the November 25, 1944 Contract.

2. It is contemplated that, subject to the provisions of this Article V, yearly deliveries of gas shall be made hereunder as follows:

	MCF		
Year	November 1-March 31, Inc.	April 1-October 31, Inc.	Total Yearly Volumes
1st	3,500,000	7,000,000	10,500,000
2nd	3,800,000	7,700,000	11,500,000
3rd	4,200,000	8,300,000	12,500,000
4th	4,500,000	9,000,000	13,500,000
5th	4,800,000	9,700,000	14,500,000
6th & Succeeding Years	5,200,000	10,300,000	15,500,000

Except as provided in Sections 3 and 4 of this Article, deliveries of the volumes recited in this Section shall be made as nearly as possible at a uniform daily rate.

3. Panhandle shall have the right to curtail or interrupt deliveries of gas to Union hereunder at any time. Such curtailments or interruptions shall not, however, reduce the volumes deliverable hereunder in excess of the following:

(a) During the five (5) month period, November 1 through March 31, inclusive, in an amount of not more than 12% of the total volumes deliverable in such period;

(b) During the seven (7) month period, April 1 through October 31, inclusive, in an amount of not

more than 8% of the total volumes deliverable in such period.

The aforesaid reductions in the rate of delivery permissible hereunder shall not operate to create a cumulative deficiency on

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November 1 of any year in excess of 10% of the annual volume deliverable hereunder during the preceding year.

If the day of first regular delivery hereunder is not a November first, the maximum deficiency allowable under this Section on the following November first shall be the pro rata portion of the aggregate deficiencies allowable under Section 3 of this Article.

4. Union shall not be obligated to take delivery from Panhandle of more than 55,000 Mcf of gas in any one day under this Agreement.

5. Until the second year of this Agreement, Union shall not be obligated to pay for any gas made available to it by Panhandle, but not taken by Union. Beginning with the second year of this Agreement (which for purposes of this Section commences on the second November first following the day of first regular delivery of gas hereunder), and in each year thereafter during the term of this Agreement, Union shall be obligated to take and pay for, or, if not taken, to pay for, at the price set forth in Article XI herein, 75% of the volumes of gas Panhandle is obligated to deliver under Section 1 of this Article after deducing from such volumes any deficiency in deliveries by Panhandle under Section 3 of this Article.

The amount, if any, payable by Union in any year for gas not taken, but which Union is obligated to take under this Section 5, shall be added to the bill sent by Panhandle to Union for gas delivered in the month of October, pro-

vided that Union shall not be obligated to pay any amount for gas not taken pursuant to the take

or pay for provisions of this Section 5 until December 20th of each year.

ARTICLE VI

Delivery and Possession of Gas

1. Panhandle shall deliver gas to Union hereunder by means of the existing connection between the pipe lines of the two companies constructed pursuant to the contract of November 25, 1944. The point of delivery shall be the point at which the international boundary between the United States and Canada intersects the Detroit River pipe line crossing constructed pursuant to such contract, and title, possession, custody and control of all gas shall pass from Panhandle to Union at such point of delivery. Before gas passes the point of delivery, Panhandle shall be responsible for any loss caused by fire, explosion, leakage, break-in-the-line, and the like, as well as for any damage to Union or to third parties caused by such fires, explosion, leakage, or anything whatever connected with the gas, its transmission, its sale or delivery. After the gas passes the point of delivery, Union shall similarly be responsible for such loss or damage.

2. Each party shall indemnify and save harmless the other party from any and all claims, causes of action or damage of any sort arising out of the maintenance or operation of the property or equipment of the indemnifying party or out of its title, possession, custody or control of the gas under Section 1 of this Article, it being the intention of the parties that the point of delivery of the gas shall be the point of division of responsibility between them.

Article VII

Pressure

1. Panhandle agrees to use due care and diligence to deliver gas to Union at such uniform pressure as Union may require, but not less than 260 pounds to the square inch gauge, except during such extraordinary periods (not to exceed 21 days during any year) as Panhandle is engaged in maintenance operations requiring the shutting down of compressor units or requiring the depressuring of pipe lines for the purpose of cleaning, repairing or performing other maintenance operations on such lines.

2. Union agrees to install, operate and maintain, at its own expense, such regulating devices as may be necessary to regulate the pressure of the gas after delivery to Union.

Article VIII

Quality

1. The gas delivered hereunder shall be natural gas, subject to the following:

(a) Panhandle may extract or permit the extraction of moisture, helium, natural gasoline, butane, propane, or other hydrocarbons (except methane) or inerts from said natural gas.

(b) Panhandle may increase or decrease the heat content of said natural gas before delivery thereof to Union, provided that such increase or decrease does not result in a total heating value above 1050 nor below 950 British Thermal units per cubic foot.

(c) Panhandle may subject or permit the subjection of said natural gas to compression, cooling, cleaning or other

processes to such extent as may be required in its transmission from the wells to the point of delivery.

2. Panhandle agrees that the gas delivered hereunder shall be merchantable, and insofar as practicable:

(a) Shall be commercially free from solid or liquid matter, dust, gum, or gum-forming constituents;

(b) Shall not contain more than 1 grain of hydrogen sulphide per 100 cubic feet;

(c) Shall not contain more than 20 grains of total sulphur per 100 cubic feet;

(d) Shall not contain an amount of moisture exceeding that corresponding to saturation at the temperature and pressure of the gas in the pipe line at a point approximately 50 feet in advance of the meter inlet header located at or near the point of delivery, and water shall not be present in liquid phase.

Article IX

Measurements

1. The sales unit of the gas deliverable by Panhandle to Union shall be one thousand cubic feet (Mcf) on the measurement basis specified below.

2. The volume and total heating value of the gas delivered hereunder shall be determined as follows:

(a) The unit of volume, for the purpose of measurement and for the determination of total heating value shall be 1 cubic foot of gas saturated with water vapor at a temperature of 60 degrees Fahrenheit and an absolute pressure of 14.73

pounds per square inch.

(b) The total heating value of the gas, per cubic foot, shall be determined by taking the arithmetic average of the heating value as recorded by the recording calorimeter of Panhandle located at its Detroit Measuring Station or at such other place as may be agreed upon between the parties. The arithmetic average for each month of the calorimeter recordings shall be used in computing heating values.

(c) The average absolute atmospheric pressure shall be assumed to be 14.4 pounds to the square inch, irrespective of actual elevation of the location of the oint of delivery above sea level or variations in such atmospheric pressure from time to time.

(d) The temperature of the gas passing the meters shall be determined by the continuous use of a recording thermometer so installed that it may properly record the temperature of the gas flowing through the meters. The arithmetic average of the temperature recorded each 24-hour day shall be used in computing gas volumes.

(e) The specific gravity and relative humidity of the gas delivered hereunder shall be determined, by approved methods, at the beginning of delivery of gas with such reasonable frequency thereafter as is found expedient in practice.

(f) The deviation from Boyle's Law of the gas delivered hereunder shall be determined, by approved methods, at the beginning of delivery of gas and with such reasonable frequency thereafter as is found expedient in practice.

ARTICLE X

Measuring Equipment

1. Panhandle will install, maintain and operate at its own expense at that point on its transmission facilities which it believes to be practicably nearest to the point of delivery, a meter or meters and other necessary measuring equipment by which the volume of gas delivered hereunder shall be measured.

2. If line loss due to breakage or abnormal leakage occurs between Panhandle's meter and the point of delivery, i.e., while the gas is still in the possession of Panhandle as provided in Article VI of this Agreement, the amount of such line loss shall be deemed not to have been delivered.

3. Union may install, maintain and operate, at its own expense, at a point on its transmission facilities determined to be practicably the nearest to the point of delivery, such check measuring equipment as it shall desire, provided that such equipment shall be so installed as not to interfere with the operation of Panhandle's measuring equipment. Panhandle shall have access to such check measuring equipment at all reasonable hours, but the reading, calibrating and adjusting thereof and the changing of charts shall be done only by Union.

4. Each party shall have the right to be present at the time of any installing, reading, cleaning, changing, repairing, inspecting, testing, calibrating, or adjusting done in connection with the other's measuring equipment, and each party shall advise the other of any intended major maintenance operation sufficiently in advance in order that the other party may conveniently have its

representative present. The records from such measuring equipment shall remain the property of the owner, but each party, upon request, will submit to the other its records and charts, together with calculations therefrom, for inspection and verification, subject to return within 10 days after receipt thereof.

5. All installations of measuring equipment used in connection with deliveries hereunder shall be made in such manner as to permit an accurate determination of the quantity of gas delivered and ready verification of the accuracy of measurement. Reasonable care shall be exercised by each party in the installation, maintenance and operation of pressure regulating equipment so as to avoid, so far as practicable, any inaccuracy in the determination of the volume of gas delivered hereunder.

6. In the event Panhandle's meter is out of service, or registering inaccurately, the volume of gas delivered hereunder shall be estimated as follows:

(a) By using the registration of any check meter or meters if installed and accurately registering in accordance with the provisions of Section 3 of this Article.

(b) If there be no check meter or if any check meter is not registering accurately, then by correcting the error if the percentage of error is ascertainable by calibration, test, or mathematical calculation.

(c) If an estimate cannot be made under either subparagraph (a) or subparagraph (b) above, then by computation based on volumes delivered under similar conditions during periods when Panhandle's meter was registering accurately.

7. Panhandle shall verify the accuracy of its measuring equipment at reasonable intervals, and, if requested, in the presence of representatives of Union, but Panhandle shall not be required to verify the accuracy of such equipment more frequently than once in any 30-day period. In the event either party shall notify the other that it desires a special test of any measuring equipment, the parties shall cooperate to effect such test promptly.

8. If, upon test, any measuring equipment, including recording calorimeter, is found to be in error not more than 2 per cent, previous recordings of such equipment shall be considered correct in computing deliveries hereunder; but such equipment shall be adjusted at once to record accurately. If, upon test, any measuring equipment shall be found to be inaccurate by an amount exceeding 2 per cent, at a recording corresponding to the average hourly rate of flow for the period since the last preceding test, then any previous recordings of such equipment shall be corrected to zero error for any period which is known definitely or agreed upon, but in case the period is not known definitely or agreed upon, such correction shall be for a period extending over one-half of the time elapsed since the date of last test, not exceeding a correction period of 16 days.

9. Each party shall preserve for a period of at least 6 years all test data, charts and other similar records.

ARTICLE XI

Price

1. All gas sold and purchased hereunder shall be paid for in coin of the United States of America at a price of thirty-five

(35) cents per Mcf, which price shall be the minimum price hereunder regardless of all adjustments hereinafter mentioned; provided further that if 120% of the regulated price of firm gas sold by Panhandle in the State of Michigan to utilities under the effective G-1 Rate Schedule (or equivalent schedule applicable to general service customers in th State of Michigan) of Panhandle's FPC Tariff, computed at 100% load factor, shall at any time, or from time to time, during the term hereof, be an amount in excess of thirty-five (35) cents per Mcf, then the price for gas sold hereunder shall be 120% of the regulated price. The term, "regulated price," as used herein is hereby defined to mean that price which is authorized (after judicial review, if any) under the provisions of the Natural Gas Act (52 Stat. 833, 15 U. S. C. Paragraphs 717-717W).

2. In the event that an increase in the price provided in Panhandle's G-1 Rate Schedule (or equivalent schedule applicable to general service customers in the State of Michigan) of Panhandle's FPC Tariff is made effective by Panhandle under the provisions of Section 4(e) of the Natural Gas Act, the following procedure shall be observed:

(a) Panhandle shall bill Union on the basis of the increased price provided in such rate schedule, pending final establishment of the new regulated price under the Natural Gas Act.

(b) Until the new regulated price is finally established, however, Union shall not be obligated to pay more than the price in effect under this Agreement immediately preceding the effective date of the increase in price in such rate schedule.

(c) Within 30 days after final establishment of a new regulated price, Union shall be obligated to pay

to Panhandle the difference between the price paid by Union under sub-section (b) above and 120% of the new regulated price, retroactive to the effective date of the new regulated price under the Natural Gas Act.

(d) Upon request of Panhandle, Union shall, as of the effective date of any increase in price in the G-1 Rate Schedule (or equivalent schedule applicable to general service customers in the State of Michigan) of Panhandle's FPC Tariff, in accordance with the provisions of Section 4(e) of the Natural Gas Act, furnish Panhandle with an undertaking satisfactory to Panhandle, conditioned upon Union's paying to Panhandle the retroactive amount under sub-section (c) above.

3. If, during any calendar month of the life of this Agreement the arithmetic average total heating value of the gas delivered or available to Union hereunder is less than 975 British thermal units per cubic foot or more than 1,025 British thermal units per cubic foot, the base price specified in Section 1 above shall be decreased in proportion to the decrease below 975 British thermal units per cubic foot or increased in proportion to the increase above 1,025 British thermal units per cubic foot.

Article XII

Billing

1. Panhandle shall render bills to Union on or before the tenth day of each month for all gas delivered hereunder during the preceding month.

2. Both Panhandle and Union shall have the right to examine, at reasonable times, books, records and charts of

the other to the extent necessary to verify the accuracy of any statement, charge, or computation made under or pursuant to any of the provisions of this Agreement.

Article XIII

Payments

1. Subject to the provisions of Article XI, Section 2, Union agrees to pay Panhandle at Panhandle's designated office, on or before the twentieth day of each month, for the gas delivered hereunder during the preceding month, as billed by Panhandle in its statement to Union for such month, according to the measurements, computations and prices herein provided.

2. Should Union fail to pay the amount of any bill for gas delivered hereunder when such amount is due, as herein provided, interest thereon shall accrue at the rate of 6 per cent per annum from the due date until the date of payment. If such failure to pay continues for 30 days after payment is due, Panhandle, in addition to any other remedy it may have hereunder or otherwise, may suspend further delivery of gas until such amount is paid; provided, however, that if Union, in good faith, shall dispute the amount of any such bill or parts thereof and shall pay to Panhandle such amount as it concedes to be correct and at any time thereafter within 30 days of a demand made by Panhandle shall furnish a good and sufficient surety bond, in amount and with sureties satisfactory to Panhandle, conditioned upon the payment of any amount ultimately

found due upon such bill after a final determination which may be reached either by agreement or judgment of the courts, as may be the case, then Panhandle shall not be

entitled to suspend further delivery of gas unless and until default be made in any of the conditions of such bond.

3. If presentation of a bill by Panhandle is delayed after the tenth day of the month, then the time of payment shall be extended accordingly unless Union is responsible for such delay.

4. In the event that an error is discovered in the amount billed in any statement rendered by Panhandle to Union, such error shall be adjusted within 30 days of the determination thereof, provided that claim therefor shall have been made within 60 days from the date of discovery of such error, but in any event, within 12 months from the date of such statement.

Article XIV

Force Majeure

1. Neither party shall be liable in damages under any clause of this Agreement to the other for any act, omission or circumstance occasioned by, or in consequence of, any acts of God, strikes, lockouts, acts of the public enemy, wars, blockades, insurrections, riots, epidemics, landslides, lightning, earthquakes, fires, storms, floods, washouts, arrests and restraints of rulers and peoples, civil disturbances, explosions, breakage or accident to machinery or lines of pipe, temporary failure of gas supply, the order of any court or governmental authority which has been resisted in good faith by all reasonable legal means, and any other

cause, whether of the kind herein enumerated, or otherwise, not within the control of the party claiming suspension and which, by the exercise of due diligence, such party is unable to prevent or overcome.

2. Such causes or contingencies affecting the performance of this Agreement by either party, however, shall not relieve it of the liability in the event of its concurring negligence or in the event of its failure to use due diligence to remedy the situation and remove the cause in an adequate manner and with all reasonable dispatch, nor shall such causes or contingencies affecting the performance of this Agreement relieve either party from its obligations to make payments of amount then due hereunder.

Article XV

Assignments

1. Either party may assign or pledge this Agreement under the provisions of any mortgage, deed of trust, indenture or similar instrument which it has executed or may execute hereafter; otherwise, neither party shall assign this Agreement or any of its rights hereunder unless it shall first have obtained the consent of the other.

2. Any corporation which shall succeed by purchase, merger or consolidation to the properties, substantially as an entirety, of Union or Panhandle, shall be entitled to the rights and shall be subject to the obligations of its predecessor in title under this Agreement.

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Article XVI

Status of Existing Contracts

1. The Contract between the parties dated November 25, 1944, shall continue in full force and effect in accordance with its terms.

2. The Contract between the parties dated March 15, 1950, as amended, under which no deliveries have been made, is hereby cancelled.

Article XVII

Arbitration

In the event of any claim or demand against either Union or Panhandle with respect to which there is a dispute as to responsibility for the gas or facilities involved, either Union or Panhandle may demand in writing that the facts material to the question of responsibility be submitted to arbitration; thereupon, within 10 days after such demand, Union and Panhandle shall each name a disinterested arbitrator and such arbitrators shall agree upon a disinterested third party as a third arbitrator. The dispute in question shall be submitted to the arbitrators so appointed and the written, signed decision of a majority of said arbitrators in respect of the facts material to the question of responsibility shall be final and binding upon Union and Panhandle without prejudice to the right of either of them to deny or dispute liability upon any other ground.

Operations under this Agreement shall continue, without prejudice, during the pendency of any such arbitration, and the

expense of such arbitration shall be borne one-half by Union and one-half by Panhandle.

Article XVIII

Miscellaneous

1. No modification of the terms and provisions hereof shall be or become effective, except by the execution of supplementary written contracts.

2. No waiver by either party of any one or more defaults by the other in the performance of any provisions of this Agreement shall operate or be construed as a waiver of any future default or defaults, whether of a like or of a different character.

3. Except as herein otherwise provided, any notice, request, demand, statement or bill provided for in this Agreement or any notice which either party may desire to give to the other shall be in writing and shall be considered as duly delivered when mailed by registered mail to the post office address of the party intended to receive the same, as the case may be, as follows:

Panhandle Eastern Pipe Line Company
120 Broadway
New York, N. Y.
Union Gas Company of Canada, Limited
Chatham, Ontario
Canada

or to such other address as either party shall designate by formal written notice to the other. Routine communications, including

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monthly statements and payments, shall be considered as duly delivered when mailed by either registered or ordinary mail.

In Witness Whereof, the parties hereto have caused this Agreement to be signed by their respective officers thereunto duly authorized and their respective corporate seals to be hereto affixed and attested by their respective Secretaries or Assistant Secretaries, the day and year first above written.

PANHANDLE EASTERN PIPE LINE COMPANY

(SEAL)

By FRED H. ROBINSON (Signed)
Vice President

Attest:

LEITH V. WATKINS (Signed)
Secretary

UNION GAS COMPANY OF CANADA, LIMITED

(SEAL)

By DAVID P. ROGERS (Signed)
President

Attest:
F. R. PALIN (Signed)
Secretary

Hearing Exhibit No. 59

PANHANDLE EASTERN PIPE LINE COMPANY

120 Broadway

New York 5, New York

October 26, 1954

Union Gas Company of Canada, Limited
Chatham, Ontario
Canada

Dear Sirs:

We refer to the Agreement for the sale and purchase of gas between our respective companies dated April 21, 1954.

Pursuant to conversations between representatives of each of us, we have agreed to amend Article IV, "Term", by striking out Article IV as it now appears in the contract and inserting the following in place thereof:

ARTICLE IV

Term

"The term of this Agreement shall be for a period of twenty years from the day of the first regular delivery of gas hereunder, but either party shall have the

right to terminate this Agreement if Panhandle does not obtain the necessary export authorization from the Federal Power Commission on or before November 1, 1955.

"In the event that Union (or any company of which Union owns a majority of the voting stock) enters into a contract with Trans-Canada Pipe Lines, Limited (or any other company which may be authorized by the Canadian Government to transport natural gas from the Province of Alberta to eastern Canada), hereinafter referred to as "Trans-Canada," for the purchase of a supply of gas substantially as great as or greater than the volumes purchased hereunder, this Agreement shall terminate and gas deliveries thereunder shall cease one year after such date as Union shall advise Panhandle that Trans-Canada gas is available to Union, provided, however, that such termination shall not take effect until such time as Panhandle shall have completed one full year's deliveries of gas under this Agreement.

"If Union has not given Panhandle notice of termination pursuant to this Article on or before November 1, 1960, this Agreement shall remain in full force and effect until the expiration date provided for in the first paragraph of this Article IV."

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If the foregoing is satisfactory to you, will you please indicate your acceptance in the place provided below therefor, and return two signed copies of this letter to us. This shall then constitute an amendment of the agreement between us dated April 21, 1954.

Yours very truly,

PANHANDLE EASTERN PIPE LINE COMPANY

By /s/ FRED H. ROBINSON
Vice President

Accepted this 4th day of November, 1954.

UNION GAS COMPANY OF CANADA, LIMITED

By /s/ DAVID P. ROGERS

President

/s/ J. PALIN

Secretary

(Corporate Seal)

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Hearing Exhibit No. 60

ONTARIO NATURAL GAS STORAGE AND PIPELINES LIMITED

INTRODUCTORY STATEMENT

Union Gas Company of Canada, Limited has caused to be incorporated a wholly-owned subsidiary named Ontario Natural Gas Storage and Pipelines Limited to store, transmit and sell for resale natural gas purchased from Panhandle Eastern Pipe Line Company pursuant to contracts between Panhandle and Union dated November 25, 1944, and April 21, 1954. These contracts will be transferred to Ontario Natural Gas Storage and Pipelines Limited by Union.

Through Ontario Natural Gas Storage and Pipelines Limited Panhandle gas will be supplied to Union Gas Company and the following other distributors serving southwestern Ontario:

United Fuel Investments, Limited (Consolidated System)
Dominion Natural Gas Company, Limited
Central Pipe Line Company Limited
Municipal Commissions, or such other organizations or companies as may be empowered to distribute gas in:

The City of Guelph
The City of Kitchener
The City of Waterloo
The City of Stratford
The Town of St. Marys

The attached schedules are designed to illustrate the operations of Ontario Natural Gas Storage and Pipelines Limited and to demonstrate that the proposal serves the public convenience and necessity and is economically feasible.

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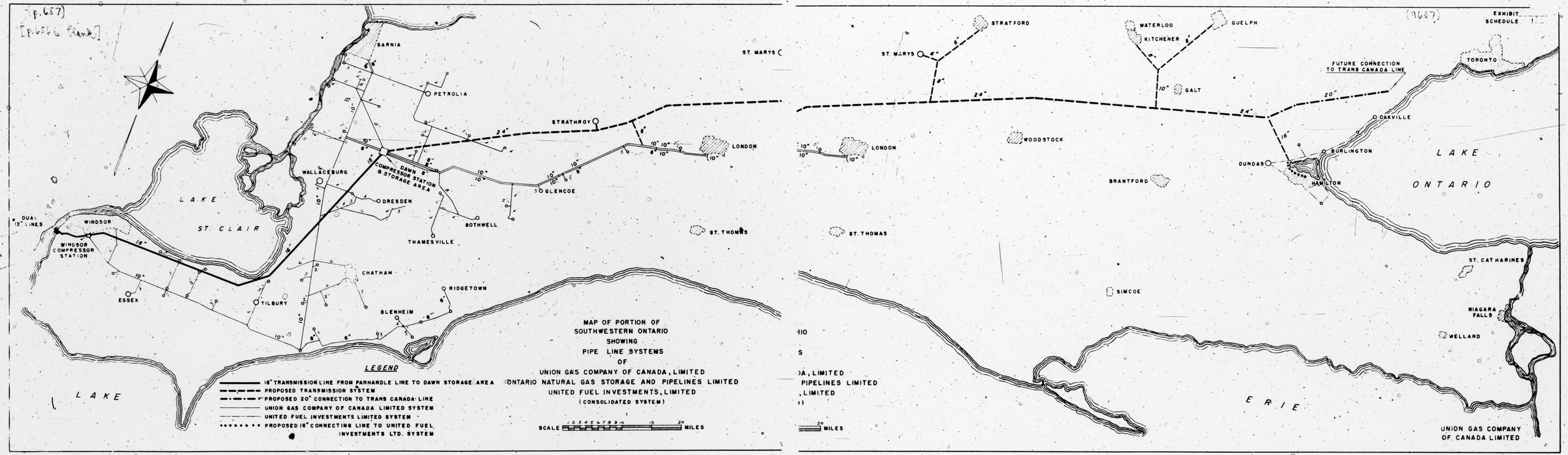
(9607)

EXHIBIT
SCHEDULE



MAP OF PORTION OF
SOUTHWESTERN ONTARIO
SHOWING
PIPE LINE SYSTEMS
OF
UNION GAS COMPANY OF CANADA, LIMITED
ONTARIO NATURAL GAS STORAGE AND PIPELINES LIMITED
UNITED FUEL INVESTMENTS, LIMITED
(CONSOLIDATED SYSTEM)

(R608)
(R 658)

EXHIBIT _____
SCHEDULE 2

SARNIA
CORUNNA POOL
SECKERTON POOL
PAYNE POOL
KIMBALL - COLINVILLE POOL
BICKFORD POOL
WAUBUNO POOL
SOMBRA POOL
D-156 STORAGE POOL
DAWN COMPRESSOR STATION & STORAGE AREA
D-167 STORAGE POOL
LONDON
BECHER FIELD
D-49 STORAGE POOL
WALLACEBURG
D-59 STORAGE POOL
D-1 STORAGE POOL
DETROIT
WINDSOR
WINDSOR COMPRESSOR STATION
LAKE ST CLAIR
CHATHAM FIELD
CAMDEN FIELD
ZONE FIELD
MOSALD FIELD
CHATHAM
DOVER FIELD
TILBURY FIELD
D'CLUTE FIELD
LAKE ERIE

MAP OF PORTION OF
SOUTHWESTERN ONTARIO
SHOWING
MARKETS, TRANSMISSION SYSTEM, STORAGE AREAS
AND LOCAL SOURCES OF SUPPLY
UNION GAS COMPANY OF CANADA, LIMITED

SCALE 1 2 3 4 5 6 7 8 9 10 15 20 MILES

(9609)

9609

Exhibit_____
Schedule 3

ONTARIO NATURAL GAS STORAGE AND PIPELINES LIMITED

Statistical Data re Markets to be Served

Note - This data has been obtained from Canadian Utilities Directory and other sources and should be used for comparative purposes only.

Communities Served	Present Population (from municipal records & other government sources)	Name of Company	Gas Now Served Type	Average B.T.U.	Number of Consumers	Approx. Annual Sales M.C.F.	Gas Consumers per 1000 population	Therms of gas sold per year per capita	Present Maximum daily demand in Therms	Gas Utilization Percent Base Resid.	Base Comm.	Heating Resid.	Heating Comm.	Industrial
Hamilton & Suburbs, including Oakville, Burlington & Dundas	311,906	United Fuel Investments Ltd.	Coke Oven blended with Oil Gas, Propane & Blast Furnace Gas	515	40,422	3,900,000	130	64.5	41,715	42.5	12.1	10.3	2.3	32.8
Brantford, Galt, St. Catherines, St. Thomas, Woodstock & other Municipalities in Southwestern Ont.	419,091	Dominion Natural Gas Company Ltd.	Natural Gas supplemented with Oil Gas & Propane	1,000	53,901	3,776,000	128	90	210,000	40.0	9.0	31.0	8.0	12.0
Windsor, London, Sarnia, Chatham & other Municipalities in Southwestern Ont.	423,263	Union Gas Company of Canada, Ltd.	Natural Gas	1,000	84,630	10,060,000	200	238	700,000	24.2	8.4	42.2	4.4	20.8
Kitchener, Waterloo and Suburbs	66,800	Public Utilities Commission	Water Gas	465	5,634	144,939	84	10.1	2,692					
Guelph & Suburbs	32,400	Board of Light & Heat Commissioners of Guelph	Coal & Water Gas supplemented with Propane	490	4,295	191,000	133	28.8	3,866					
Stratford & Suburbs	21,500	Not served	-	-	-	-	-	-	-					
Aylmer & District	10,000	Central Pipe Line Company	Natural	1,000	2,500	100,000	250	100	7,782					
St. Marys & Suburbs	4,600	Not served	-	-	-	-	-	-	-					

(9620)

9620

Exhibit
Schedule 6

ONTARIO NATURAL GAS STORAGE AND PIPELINES LIMITED

Analysis of Gas Distribution Under Maximum Annual Load

All Quantities in MMCF

	First Year			Second Year			Third Year			Fourth Year			Fifth Year		
	Volume	Max. Daily Demand	Load Factor	Volume	Max. Daily Demand	Load Factor	Volume	Max. Daily Demand	Load Factor	Volume	Max. Daily Demand	Load Factor	Volume	Max. Daily Demand	Load Factor
Sales (Firm)															
Union	1,112	39.6	7.8	1,928	46.5	11.3	2,800	53.8	14.3	4,000	67.3	16.3	4,747	74.8	17.4
United	3,439	19.1	49.3	4,405	26.8	45.0	5,322	34.4	42.4	6,063	40.5	41.0	6,798	46.5	40.0
Dominion	1,564	20.6	20.8	1,876	23.8	21.6	2,074	25.7	22.1	2,553	30.5	22.9	2,778	32.8	23.2
Central Pipe Line	100	1.0	27.4	150	1.5	27.4	200	2.0	27.4	200	2.0	27.4	200	2.0	27.4
Kitchener)															
Waterloo)	419	2.6	44.2	655	4.5	39.4	856	6.0	39.1	1,091	7.8	38.4	1,360	10.0	37.3
Guelph	229	1.5	41.8	344	2.4	39.2	426	3.0	38.9	531	3.8	39.3	655	4.8	37.4
Stratford	89	.57	42.8	168	1.18	39.0	245	1.76	38.2	316	2.29	37.8	386	2.85	37.1
St. Marys	19	.12	43.3	35	.25	38.4	52	.37	38.5	67	.48	38.2	81	.60	37.0
Total Firm Gas for Resale	6,971	85.09	22.5	9,561	106.93	24.5	11,975	127.03	25.7	14,821	154.67	26.3	17,005	174.35	26.6
Interruptible Gas	2,000			2,250			2,500			2,500			2,500		
Company use	130			156			182			208			234		
Leakage	210			282			296			380			400		
Total Purchase Requirements	9,311			12,249			14,953			17,909			20,139		
Contracted Purchases															
Maximum	16,000			17,000			18,000			19,000			20,000		
Minimum	5,500			14,125			14,875			15,625			16,375		
Contracted Daily Purchase Rate															
Normal - Winter		24			26			28			30			32	
- Summer		60			63			66			69			72	
Minimum - Winter		0			0			0			0			0	
Maximum - Summer		88			88			88			88			88	
											660				

(9621)

9621

Exhibit_____
Schedule 7

ONTARIO NATURAL GAS STORAGE AND PIPELINES LIMITED

Storage Utilization

(Under maximum load conditions)

All Volumes in MMCF

		Fifth Year
WINTER GAS REQUIREMENTS		
(a) United, Kitchener, Waterloo, Guelph, Stratford, St. Marys		
Total annual-firm load (Schedule 6)	9,280	
Winter load 65% of total		6,032
(b) Dominion, Central Pipe Line		
All winter load firm gas (Schedule 6)		2,978
(c) Union		
Annual firm load total system	14,885	
Winter load 65%	9,675	
Total local production and purchases winter period	10,138	
Winter purchases from Storage Co.	7,278	2,397
Total winter gas requirements from Storage Co.		11,407
Minimum winter purchases		4,224
Winter requirements from storage		7,183
STORAGE UTILIZATION		
Total reservoir capacity		26,670
Cushion, Pools #49 & #59 to 375 psia formation pressure		6,000
" " #1 to [redacted]183 [redacted] " " "		549
" " #156 to 375 psia formation pressure		3,750
Total cushion gas		10,299
Yearly working storage capacity		14,674
Winter requirements from storage		7,183
DELIVERABILITY		
Maximum daily peak requirements (from Schedule 6)		174.35
Minimum daily purchase rate		0
Available from #49 Pool for late season peak		22
" " #59 " " " " " "		120
" " # 1 " " " " " "		2
" " #156 " " " " " "		36
Total available for late season peak		180

Exhibit____

Schedule 8

ONTARIO NATURAL GAS STORAGE AND PIPELINES LIMITED

Storage Reservoir Data - Lambton County

Volumes in M.M.C.F.

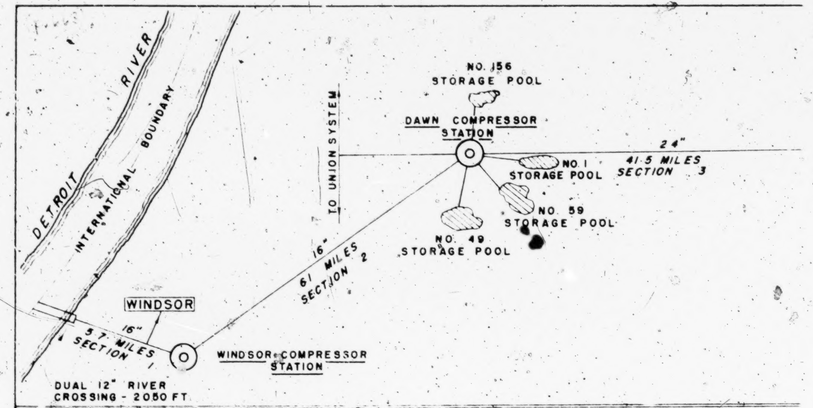
	59 Pool	49 Pool	No. 1 Pool(1)	Dawn 156(2) Pool	167 Pool	Waubuno
1. Area of reservoir	144.5 acres	132.3 acres	?	Not yet defined		
2. Maximum thickness of pay	245 feet	195 feet	20 feet	268 feet	212 feet	361 feet
3. Porosity factor	13.5%	10.0%	15.0%	13.5%	8.0%	10.0%
4. Initial reserves	8,700	5,120	2,850	10,000(est.)	5,000	11,650
5. Initial formation pressure p.s.i.a.	898	898	801	921	952	998
6. Actual open flow at initial formation pressure MMCF	298	72	12	59.4	66.0	95.8
7. Total production initial gas	8,430	4,280	2,301	-	-	-
8. Minimum formation pressure reached p.s.i.a.	27	140	183	-	-	-
9. Residual initial gas	270	840	549	-	-	-
10. Water conditions at minimum pressure	Nil	Nil	Minor	Bottom hole	Bottom hole	Bottom hole
11. Accrued storage to October 31, 1954	7,389	3,439	0.9	-	-	-
12. Total gas in pool October 31, 1954	7,659	4,279	550	10,000	5,000	11,650
13. Formation pressure at October 31, 1954, p.s.i.a.	829	769	183	921	952	998
14. Minimum formation storage pressure p.s.i.a.	375	375	183	375	375	375
15. Volume in reservoir at minimum storage						
16. formation pressure (cushion)	3,750	2,250	549	3,750	1,950	4,425
17. Yearly working storage capacity	4,950	2,870	604	6,250	3,050	7,225
18. Required well-head working pressure gauge	250	250	150	250	250	250
19. Average production per well at minimum reservoir						
20. pressure and required well-head pressure	22	3	0.33	5	4.1	7(est.)(3)
21. Number of wells	4	6	6	2	4	5
22. Additional wells required	0	0	0	2	0	0
23. Daily production available under minimum						
24. formation and operating pressure	88	18	2(4)	20	16	35

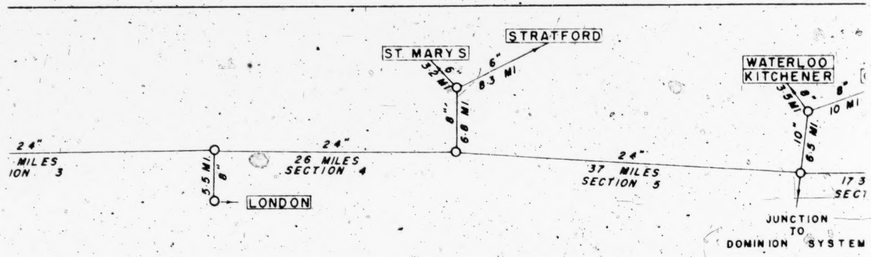
Note: (1) This pool is only useful to take or deliver gas at a slow rate to accommodate overflow of gas from pools 49 and 59. Its tested rate of reception from line pressure of 400 p.s.i.g. to well-head pressure of 168 p.s.i.g. is 4 M.M.C.F. per day.

(2) This pool not yet fully developed.

(3) In Pools 156, 167 and Waubuno, 8 cable tool wells are to be acidized.
In Waubuno - 2 rotary wells have to be acidized after perforation, and 3 cable tool wells are to be acidized.

(4) No delivery in fiscal year 1954-1955.





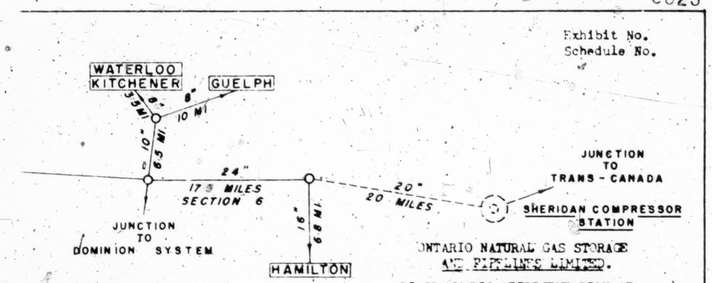


Exhibit No.
Schedule No.

ONTARIO NATURAL GAS STORAGE AND PIPELINES LIMITED.

DIAGRAMMATIC REPRESENTATION OF OPERATIONS UNDER CRITICAL CONDITIONS IN FIFTH YEAR.

- - - - - - - - - - POSSIBLE EXTENSIONS

LINE FLOW

	SECTION 1	SECTION 2	SECTION 3	SECTION 4
"CRITICAL WINTER CONDITIONS" MAXIMUM MARKET DEMAND, MINIMUM SUPPLY FROM PANHANDLE.				
FLOW IN MMSCF/DAY				
IN	33	13	125	109
BRANCH TAKE-OFF	20	13	16	4
OUT, AT END OF SECTION	13	Nil	109	105
FROM STORAGE POOLS				
PRESSURE P.S.I.G.				
INLET	260	250	355	295
AT END OF SECTION	250	250	295	260
"CRITICAL SUMMER CONDITIONS" MINIMUM MARKET DEMAND, MAXIMUM SUPPLY FROM PANHANDLE.				
FLOW IN MMSCF/DAY				
IN	88	83	15	15
BRANCH TAKE-OFF	5		Nil	1
OUT, AT END OF SECTION	83	15	15	14
INTO STORAGE POOLS				
PRESSURE P.S.I.G.				
INLET	260	260	305	305
AT END OF SECTION	210	475	205	200
	Between International Boundary and Windsor Station.	Between Windsor Station and Dawn Station.	Between Dawn Station and London Junction.	Between London Junction and St. Mary's, Stratford Junction.

FLOW CONDITIONS

	SECTION 4	SECTION 5	SECTION 6
	109	105	50
	4	55	50
	105	50	
	295	260	210
	260	210	200
	15	14	10.5
	1	3.5	10.5
	14	10.5	
	205	200	200
	200	200	200
on.	Between London Junction and St. Mary's, Stratford Junction.	Between St. Mary's-Stratford Junction and Kitchener-Waterloo-Guelph Junction.	Between Guelph-Kitchener-Waterloo Junction and Hamilton Junction.

COMPRESSOR STATION CAPACITIES

	WINDSOR	DAWN STORAGE POOL SERVICE	DAWN MAIN PIPE LINE SERVICE
"CRITICAL WINTER CONDITIONS"			
OPERATION:-		WITHDRAWAL	
INTAKE VOLUME, MMSCF/DAY	13	125	125
INTAKE PRESSURE P. S. I. A.	265	370	370
DISCHARGE PRESSURE P.S.I.A.	265	370	370
COMPRESSION RATIO			
BHP/MMSCF/DAY			
BHP REQUIRED	No	No	No
SPARE H.P.	Compression	Compression	Compression
H.P. PREVIOUSLY INSTALLED	Needed	Needed	Needed
ENGINE H.P. TO BE ADDED			
TOTAL H.P. INSTALLED			
"CRITICAL SUMMER CONDITIONS"			
OPERATION:-		INJECTION	
INTAKE VOLUME, MMSCF/DAY	83	68	15
INTAKE PRESSURE P.S.I.A.	225	490	490
DISCHARGE PRESSURE P.S.I.A.	675	865	490
COMPRESSION RATIO	3.00	1.77	
BHP/MMSCF/DAY	56.6	31.6	
BHP REQUIRED	5530	2150	No
SPARE H.P.		350	Compression
H.P. PREVIOUSLY INSTALLED	1200	2500	Needed
ENGINE H.P. TO BE ADDED	1800	Nil	
TOTAL H.P. INSTALLED	5000 *	2500	

* Note: Since these extreme peak conditions are not likely to occur for any extended periods it is proposed to operate at a 10% overload on peak days.

ONTARIO NATURAL GAS STORAGE AND PIPELINES LIMITED

Investment Detail
(Canadian Dollars)

Assets to be transferred to Ontario Natural Gas Storage and Pipelines Limited by Union Gas Company of Canada, Limited:			
Property as detailed on Page 2 of this Schedule		$ 4,019,000	
Gas in Storage			
Cushion gas at book value	$ 1,648,000		
Inventory gas for resale at book value	904,000	2,552,000	
Compressor and other storage area and transmission line stores and spare parts estimated at		129,000	$ 6,700,000
Property to be Constructed:			
Compression-Windsor-3800 HP @ $400	$ 1,520,000		
-Dawn -Changes to existing units	50,000	$ 1,570,000	
Pipe Lines - 24" O.D. - 122 miles	$10,140,000		
16" O.D. - 6.8 "	358,000		
10" I.D. - 9.5 "	329,000		
8" I.D. - 25.5 "	674,000		
6" I.D. - 9 "	195,000	11,696,000	
Miscellaneous			
Meter and regulator stations	$ 350,000		
Dehydration	200,000		
Radio	60,000		
Housing	75,000		
Miscellaneous tools and equipment	100,000		
Warehousing	60,000		
Vehicles	50,000		
Contingencies	89,500		
Overhead and interest	45,500	1,030,000	
Total new property			14,296,000
Cost of organization and financing		$ 400,000	
Working capital		1,104,000	1,504,000
Total investment			$ 22,500,000

Exhibit
Schedule 10

ONTARIO NATURAL GAS STORAGE AND PIPELINES LIMITED

Estimated Value of Property to be transferred from Union Gas Company of Canada, Limited.

	Cost	Accrued Depreciation at rates provided in accounts of Union Gas Company of Canada, Limited	Net Value
Windsor-Dawn 16" line	$ 2,423,000	$ 167,000	$ 2,256,000
Detroit River crossing	157,000	24,000	133,000
Detroit River to Windsor compressor station 16" line	289,000	45,000	244,000
Compressor Stations:			
Windsor	300,000	45,000	255,000
Dawn	592,000	266,000	326,000
Meter and Regulator Stations:			
Detroit River	15,000	3,000	12,000
Dawn	137,000	18,000	119,000
Storage area wells, lines, etc.	687,000	114,000	573,000
Miscellaneous items:			
Land, equipment, vehicles, etc.	109,000	8,000	101,000
	$ 4,709,000	$ 690,000	$ 4,019,000

Exhibit
Schedule 12

ONTARIO NATURAL GAS STORAGE AND PIPELINES LIMITED

Statement re Proposed Plan of Financing

Total capital required (see Schedule 10)	$ 22,500,000

Proposed Capital Structure

First mortgage bonds - 4% - par value	$ 11,000,000	
Debentures - 4½% - par value	5,000,000	
Common stock	6,500,000	
Total -	$ 22,500,000	

It is proposed that the first mortgage bonds will be retired through sinking fund as follows:

During 4th and 5th years of operations @ $400,000 per annum	$ 800,000
During the 6th to 10th years of operations @ $600,000 per annum	3,000,000
During the 11th to 18th years of operations @ $700,000 per annum	5,600,000
During the 19th and 20th years of operations @ $800,000 per annum	1,600,000
	$ 11,000,000

It is proposed that the debentures will be retired through sinking fund as follows:-

During 5th to 7th years of operations @ $250,000 per annum	$ 750,000
During 8th to 13th years of operations @ $300,000 per annum	1,800,000
During 14th to 20th years of operations @ $350,000 per annum	2,450,000
	$ 5,000,000

ONTARIO NATURAL GAS STORAGE AND PIPELINES LIMITED

Statement re Proposed Plan of Financing

It is proposed that all bonds, debentures and common stock will be purchased by Union Gas Company of Canada, Limited for the following consideration:-

Transfer of assets by Union Gas Company to Ontario Natural Gas Storage and Pipelines Limited, as per Schedule 10	$ 6,700,000
Cash subscription	15,800,000
Total -	$ 22,500,000

Union Gas Company of Canada, Limited would obtain funds for its cash subscription through the sale of its own bonds and debentures, possibly combined with the issue by it of additional capital stock.

Exhibit
Schedule 12A
Page 1 of 2 pages

ONTARIO NATURAL GAS STORAGE AND PIPELINES LIMITED

Re - Financing

Letterhead of - A. E. Ames & Co. Limited

Investment Securities
Toronto

December 29th, 1954.

Union Gas Company of Canada, Limited,
Gas Building,
Fifth Street,
CHATHAM, Ontario.

Dear Sirs:

We have now had an opportunity to study the memorandum dated December 21, 1954 entitled ...

"UNION GAS COMPANY OF CANADA, LIMITED

Memorandum on Estimated Operating Results
and Proposed Method of Financing its
Wholly-Owned Subsidiary Company

ONTARIO NATURAL GAS STORAGE AND
PIPELINES LIMITED"

which you furnished to us covering certain financial aspects of your proposal to import large additional quantities of natural gas from the United States for a period of twenty years under a contract with Panhandle Eastern Pipe Line Company dated April 21, 1954. From the information contained in such memorandum and obtained from discussions with officials of your Company, our general understanding of the entire project is as follows:

Union Gas Company of Canada, Limited (hereafter referred to as "Union Company") is presently purchasing and importing 5.5 billion cubic feet of natural gas per annum, under contract dated November 25, 1944 with Panhandle Eastern Pipe Line Company. Union Company has entered into a further contract with Panhandle, referred to in the paragraph above, which provides for the purchasing and importing of additional volumes of gas ranging up to 15.5 billion cubic feet per annum.

Union Company has caused to be incorporated a wholly-owned subsidiary, Ontario Natural Gas Storage and Pipelines Limited (hereafter referred to as "Storage Company"). It is proposed that Union Company will assign to Storage Company the Panhandle contracts of 1944 and 1954 above referred to. Storage Company will then itself construct, or purchase from Union Company at an equitable price to the extent already available, all plant, installations, etc., together with gas then in storage, required for use in the marketing of the gas to be purchased under the said contracts. These facilities will consist mainly of dual 12" pipe lines connecting with the Panhandle pipe lines at the international boundary under the Detroit

ONTARIO NATURAL GAS STORAGE AND PIPELINES LIMITED

Letterhead of - A. E. Ames & Co. Limited

Union Gas Company of Canada, Limited, December 29th, 1954.

River and extending to a point near Ojibway, Ontario; approximately 5.7 miles of 16" transmission line from Ojibway to Windsor, Ontario; approximately 61 miles of 16" pipe line from Windsor to the underground storage area in Dawn Township; approximately 122 miles of 24" pipe line extending from the Dawn storage area to a point near Hamilton, Ontario, together with smaller size lateral lines required to furnish gas to wholesale customers along the line.

The other facilities will consist mainly of a 2500 h.p. compressor station at Dawn; a 5000 h.p. compressor station at Windsor, field lines and storage wells, etc., required in connection with the operation of the underground storage area in Dawn Township.

We understand that the estimated cost to Storage Company of all these plant facilities will be approximately $18,315,000, in addition to which Storage Company will require an estimated amount of $4,185,000 to provide for working capital, cushion gas, etc.

It is proposed that the total capital requirements of $22,500,000 would be raised through the issue of the following securities ...

First mortgage bonds	(20 years)	$11,000,000
Debentures	(20 years)	5,000,000
Common Stock	(to be issued to Union Company in exchange for assets to be acquired from that Company as outlined in the above-mentioned memorandum.)	6,500,000
	TOTAL	$22,500,000

On the basis of our discussions and the information furnished to us, it is our opinion that Union Company will have no difficulty in obtaining the approximately $16,000,000 cash required to finance Storage Company through the sale of Union Company's First Mortgage Bonds and Debentures to be secured in part by pledge of the above-mentioned obligations and common stock of Storage Company. It will be necessary for us to be provided with evidence that Storage Company will receive sufficient volumes of gas to enable it to satisfactorily service firm contracts for resale, which contracts will provide sufficient net revenue to fully service the proposed First Mortgage Bonds and Debentures.

The terms of the bonds and debentures would have to conform to the requirements, market and otherwise, existing at the time of issue and be subject to the satisfactory legal opinion of our Counsel.

Yours very truly,

A. E. AMES & CO. Limited,
By (Signed) R. B. WEST
Director.

RBWest: MRM.

Exhibit
Schedule 14

Page 1 of 8 pages

ONTARIO NATURAL GAS STORAGE AND PIPELINES LIMITED

Statement of Revenues, Expenses and Net Income
(For first 5 years of operations)

(Values in Canadian dollars)		First Year	Second Year	Third Year	Fourth Year	Fifth Year
1. Volume of sales in M.M.C.F.	Page 2	8,971	11,811	14,475	17,321	19,505
2. Value of gas sales	Page 2	$ 5,149,950	$ 6,777,770	$ 8,314,130	$ 10,063,650	$ 11,398,590
3. Cost of gas send out	Page 3	$ 3,209,933	$ 4,389,039	$ 5,401,561	$ 6,511,404	$ 7,368,158
4. Operating expenses	Page 5	624,413	643,504	659,744	681,017	698,409
5. Maintenance expenses	Page 6	52,872	84,146	112,418	142,482	171,202
6. Depreciation and amortization	Page 7	747,731	793,731	793,731	805,261	805,261
7. Taxes - Other than on income	Page 8	203,649	215,649	215,649	218,337	218,337
8. - On income	Page 8	-	-	52,225	518,740	743,800
9. Total operating expenses and taxes		$ 4,838,598	$ 6,126,069	$ 7,235,328	$ 8,877,241	$ 10,005,167
10. Utility operating income		$ 311,352	$ 651,701	$ 1,078,802	$ 1,186,409	$ 1,393,423
11. Less: Interest and other funded debt charges	Page 7	682,500	682,500	682,500	666,500	639,250
12. Net income		(Loss $ 371,148)	(Loss $ 30,799)	$ 396,302	$ 519,909	$ 754,173
13. Depreciated rate base at end of year		$ 20,018,526	$ 20,326,229	$ 19,602,771	$ 20,478,567	$ 19,774,143
14. % utility operating income on rate base		1.54%	3.21%	5.50%	5.79%	7.04%

ONTARIO NATURAL GAS STORAGE AND PIPELINES LIMITED

Exhibit
Schedule 14

Volume and Value of Gas Sales
(For first 5 years of operations)

(Volumes in M.M.C.F.) (Values in Canadian dollars)	First Year	Second Year	Third Year	Fourth Year	Fifth Year
Volume of sales in M.M.C.F.					
Firm gas					
United Fuel Investments, Limited (Consolidated System)	3,439	4,405	5,322	6,063	6,798
Union Gas Company of Canada, Limited	1,112	1,928	2,800	4,000	4,747
Dominion Natural Gas Company, Limited	1,564	1,876	2,074	2,553	2,778
Central Pipe Line Company, Limited	100	150	200	200	200
Cities of Kitchener and Waterloo	419	655	856	1,091	1,360
City of Guelph	229	344	426	531	655
City of Stratford	89	168	245	316	386
Town of St. Marys	19	35	52	67	81
Total firm gas	6,971	9,561	11,975	14,821	17,005
Interruptible gas					
United Fuel Investments, Limited (Consolidated System)	1,000	1,250	1,500	1,500	1,500
Union Gas Company of Canada, Limited	1,000	1,000	1,000	1,000	1,000
Total interruptible gas	2,000	2,250	2,500	2,500	2,500
Total volume of sales	8,971	11,811	14,475	17,321	19,505
Value of sales					
Firm gas					
United Fuel Investments, Limited (Consolidated System)	$ 1,937,170	$ 2,537,350	$ 3,114,060	$ 3,579,090	$ 4,039,140
Union Gas Company of Canada, Limited	1,024,640	1,470,740	1,946,440	2,648,740	3,073,450
Dominion Natural Gas Company, Limited	821,100	984,900	1,098,620	1,419,790	1,571,740
Central Pipe Line Company, Limited	67,000	100,500	134,000	134,000	134,000
Cities of Kitchener and Waterloo	242,570	389,650	512,080	656,330	824,800
City of Guelph	134,470	205,520	255,180	319,530	396,850
City of Stratford	51,950	100,560	147,590	190,840	234,380
Town of St. Marys	11,050	21,050	31,160	40,330	49,230
Total firm gas	$ 4,289,950	$ 5,810,270	$ 7,239,130	$ 8,988,650	$ 10,323,590
Interruptible gas					
United Fuel Investments, Limited (Consolidated System)	$ 430,000	$ 537,500	$ 645,000	$ 645,000	$ 645,000
Union Gas Company of Canada, Limited	430,000	430,000	430,000	430,000	430,000
Total interruptible gas	$ 860,000	$ 967,500	$ 1,075,000	$ 1,075,000	$ 1,075,000
Total value of sales	$ 5,149,950	$ 6,777,770	$ 8,314,130	$ 10,063,650	$ 11,398,590

ONTARIO NATURAL GAS STORAGE AND PIPELINES LIMITED

Exhibit
Schedule 14

Cost of Gas Send Out
(First 5 years of operations)

	First Year	Second Year	Third Year	Fourth Year	Fifth Year
Volume of gas purchases and send out in M.M.C.F.					
Purchases from Panhandle Eastern Pipe Line Company:					
Under contract of November 25, 1944	5,500	5,500	5,500	5,500	5,500
Under contract of April 21, 1954	4,000	8,625	9,375	12,000	14,500
Total purchases - M.M.C.F.	9,500	14,125	14,875	17,500	20,000
Total gas requirements:					
Volume of sales	8,971	11,811	14,475	17,321	19,505
Company use	130	156	182	208	234
Unaccounted for	210	282	296	380	400
Total send out - M.M.C.F. (Sch.6)	9,311	12,249	14,953	17,909	20,139
Net volume into or out of (-) storage	189	1,876	- 78	- 409	- 139
Cost of gas send out (Canadian dollars)					
Volume of gas send out as above - M.M.C.F.	9,311	12,249	14,953	17,909	20,139
Cost per M.C.F. of gas sent out - Note A	34.474¢	35.832¢	36.123¢	36.358¢	36.586¢
Total cost of gas sent out	$ 3,209,933	$ 4,389,039	$ 5,401,561	$ 6,511,404	$ 7,368,158

Note A - Price per M.C.F. of gas sent out based on contract price of 30¢ per M.C.F. under 1944 contract and 35¢ per M.C.F. under 1954 Panhandle contracts at par of exchange, plus 3¢ per M.C.F. in each case for import duty.

Storage gas valued on "first-in first-out" basis.

ONTARIO NATURAL GAS STORAGE AND PIPELINES LIMITED

Operating, General and Administrative Expenses
(For first 5 years of operation)

Exhibit
Schedule 14

(Values in Canadian dollars)	First Year		Second Year		Third Year		Fourth Year		Fifth Year	
Operating Expenses										
Transmission										
Supervision and engineering	$26,700		$27,370		$28,055		$28,760		$29,480	
Measuring and regulating	38,792		39,760		40,755		41,775		42,820	
Operation of mains	42,856		43,930		45,030		46,156		47,310	
Property upkeep and rental	7,653		7,845		8,040		8,240		8,450	
Shop office	8,600		8,815		9,035		9,260		9,490	
Insurance	4,797		6,987		6,987		6,987		6,987	
Workmen's compensation	1,390		1,425		1,460		1,495		1,535	
Unemployment insurance	1,478		1,515		1,555		1,595		1,635	
Rents	1,500		1,500		1,500		1,500		1,500	
Sundries	5,000	$138,766.	5,125	$144,272	5,255	$147,672	5,385	$151,153	5,520	$154,727
Compressor station										
Labour	$51,433		$52,720		$54,040		$55,390		$56,775	
Fuel	36,197		45,148		53,100		61,081		69,148	
Lubricating oil	2,408		3,670		3,945		4,760		5,575	
Electricity	14,000		14,000		14,000		14,000		14,000	
Heat and steam	306		326		330		333		337	
Tools and supplies	2,000		2,050		2,100		2,155		2,210	
Property upkeep	2,000		2,050		2,100		2,155		2,210	
Water	2,500	110,844	2,500	122,464	2,500	132,115	2,500	142,374	2,500	152,755
Storage Area										
Supervision and engineering	$19,450		$19,936		$20,435		$20,945		$21,470	
Storage										
Labour - storage area and well lines	$11,546		$11,835		$12,130		$12,435		$12,745	
Supplies and expenses	1,000		1,025		1,050		1,075		1,100	
Rentals	20,000		20,000		20,000		24,200		24,200	
	$32,546		$32,860		$33,180		$37,710		$38,045	
Compressor station										
Labour	$63,712		$65,305		$66,940		$68,615		$70,330	
Fuel	6,380		7,955		9,355		10,762		12,185	
Lubricating oil	1,000		1,250		1,500		1,750		2,000	
Electricity	4,400		4,400		4,400		4,400		4,400	
Heat and steam	862		896		905		910		915	
Tools and supplies	5,000		5,125		5,255		5,390		5,525	
Property upkeep	9,518		9,755		10,000		10,250		10,510	
	$90,872		$94,686		$98,355		$102,077		$105,865	
Regulating and measuring										
Labour	$50,710		$51,975		$53,275		$54,607		$55,975	
Supplies and expenses	4,000		4,100		4,205		4,310		4,420	
	$54,710		$56,075		$57,480		$58,917		$60,395	

ONTARIO NATURAL GAS STORAGE AND PIPELINES LIMITED

Operating, General and Administrative Expenses

Exhibit Schedule 14.

(Values in Canadian dollars)	First Year		Second Year		Third Year		Fourth Year		Fifth Year	
Dehydration plant										
Heat and steam	$ 1,724		$ 1,792		$ 1,810		$ 1,820		$ 1,830	
Supplies	800		815		830		845		860	
Glycol	500		500		500		500		500	
	$ 3,024		$ 3,107		$ 3,140		$ 3,165		$ 3,190	
Miscellaneous										
Plant office	$ 4,800		$ 4,920		$ 5,045		$ 5,170		$ 5,300	
Communication	13,100		13,430		13,765		14,110		14,465	
Insurance	4,102		4,102		4,102		4,102		4,102	
Workmen's compensation	1,275		1,310		1,345		1,380		1,415	
Unemployment insurance	1,355		1,390		1,425		1,460		1,495	
Other labour and sundries	3,000		3,075		3,150		3,230		3,310	
Water	500		500		500		500		500	
	$28,132	228,734	$28,727	235,391	$29,332	241,922	$29,952	252,766	$30,587	259,552
General and Administrative Expenses										
Salaries and expenses of officers and directors	$32,700		$33,520		$34,360		$35,220		$36,100	
Other general office salaries	30,500		31,265		32,050		32,850		33,670	
Expenses of general office employees	1,000		1,125		1,250		1,375		1,500	
Printing, stationery, supplies, etc.	3,000		3,150		3,300		3,450		3,600	
Communication	1,000		1,125		1,250		1,375		1,500	
Special service fees and expenses	1,500		1,500		1,500		1,500		1,500	
Legal expense	3,500		3,500		3,500		3,500		3,500	
Audit expense	2,000		2,000		2,000		2,000		2,000	
Insurance	1,500		1,500		1,500		1,500		1,500	
Injuries and damages	15,000		17,500		20,000		22,500		25,000	
Employees' welfare	4,200		4,400		4,600		4,800		5,000	
Employees' group insurance	6,000		6,150		6,305		6,460		6,620	
Employees' pensions	25,000		25,625		26,265		26,920		27,595	
Workmen's compensation	600		615		630		645		660	
Unemployment insurance	600		615		630		645		660	
Miscellaneous expense	4,000		4,250		4,500		4,750		5,000	
Public relations expense	7,500		7,500		7,500		7,500		7,500	
Donations	2,000		2,250		2,500		2,750		3,000	
Bond trustees' fees and expenses	7,500		7,500		7,500		7,500		7,500	
Property upkeep and rental	15,000		15,000		15,000		15,000		15,000	
Franchise requirements	1,000		1,000		1,000		1,000		1,000	
Contingencies - (Regulating expense, etc.)	25,000		25,000		25,000		25,000		25,000	
Organization expense amortization	2,500	192,600	2,500	198,590	2,500	204,640	2,500	210,740	2,500	216,905
		$670,944		$700,717		$726,349		$757,033		$783,939
Less: Duplicate charges credit		46,531		57,213		66,605		76,016		85,530
Total expenses		$624,413		$643,504		$659,744		$681,017		$698,409

ONTARIO NATURAL GAS STORAGE AND PIPELINES LIMITED

Exhibit
Schedule 14

Maintenance Expenses
(For first 5 years of operations)

(Values in Canadian dollars)	First Year		Second Year		Third Year		Fourth Year		Fifth Year	
Transmission										
Supervision and engineering		$16,550		$16,550		$16,550		$16,550		$16,550
Maintenance of										
Structures and improvements	$ 1,443		$ 2,886		$ 4,329		$ 5,772		$ 7,215	
Compressor equipment	990		7,981		11,971		15,962		19,952	
Pipe lines	14,329		28,659		42,988		57,318		71,647	
Measuring and regulating equipment	620		1,239		1,859		2,478		3,098	
Other plant and equipment	3,550	20,932	7,100	47,865	10,650	71,797	14,200	95,730	17,750	119,662
Total transmission		$37,482		$64,415		$88,347		$112,280		$136,212
Storage Area										
Supervision and engineering		$11,050		$11,050		$11,050		$11,050		$11,050
Maintenance of										
Structures and improvements	$ 618		$ 1,236		$ 1,854		$ 2,472		$ 3,090	
Compressor equipment	888		1,775		2,663		3,550		4,438	
Storage wells and lines	698		1,397		2,095		4,584		5,730	
Measuring and regulating equipment	476		953		1,429		1,906		2,382	
Dehydration plant	660		1,320		1,980		2,640		3,300	
Other plant and equipment	1,000	4,340	2,000	8,681	3,000	13,021	4,000	19,152	5,000	23,940
Total storage area		$15,390		$19,731		$24,071		$30,202		$34,990
Total maintenance expenses		$52,872		$84,146		$112,418		$142,482		$171,202

ONTARIO NATURAL GAS STORAGE AND PIPELINES LIMITED

A - Provision for depreciation and amortization
B - Interest and other funded debt charges
(For first 5 years of operations)

Exhibit
Schedule 14

(Values in Canadian dollars)

A - Provision for depreciation and amortization	First Year	Second Year	Third Year	Fourth Year	Fifth Year
Value of property to be acquired from Union Gas Company of Canada, Limited as at end of each period	$ 3,795,000	$ 3,795,000	$ 3,795,000	$ 4,019,000	$ 4,019,000
Cost of property to be constructed as at end of each period	13,296,000	14,296,000	14,296,000	14,296,000	14,296,000
Gross value of property	$ 17,091,000	$ 18,091,000	$ 18,091,000	$ 18,315,000	$ 18,315,000
Salvage allowance - 1/8th of value	2,136,375	2,261,375	2,261,375	2,289,375	2,289,375
Total value to be amortized	$ 14,954,625	$ 15,829,625	$ 15,829,625	$ 16,025,625	$ 16,025,625
Provision for amortization and depreciation to write off cost less salvage over 20 year period	$ 747,731	$ 793,731	$ 793,731	$ 805,261	$ 805,261

B - Interest and other funded debt charges					
First Mortgage Bonds					
Amount outstanding during year	$ 11,000,000	$ 11,000,000	$ 11,000,000	$ 10,600,000	$ 10,200,000
Interest thereon @ 4%	$ 440,000	$ 440,000	$ 440,000	$ 424,000	$ 408,000
Debentures					
Amount outstanding during year	$ 5,000,000	$ 5,000,000	$ 5,000,000	$ 5,000,000	$ 4,750,000
Interest thereon @ 4½%	$ 225,000	$ 225,000	$ 225,000	$ 225,000	$ 213,750
Annual interest cost	$ 665,000	$ 665,000	$ 665,000	$ 649,000	$ 621,750
Amortization of financing costs	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500
Total interest and other funded debt charges	$ 682,500	$ 682,500	$ 682,500	$ 666,500	$ 639,250

ONTARIO NATURAL GAS STORAGE AND PIPELINES LIMITED

Exhibit Schedule 14

Taxes
(For first 5 years of operations)

(Values in Canadian dollars)	First Year	Second Year	Third Year	Fourth Year	Fifth Year
Taxes other than on income					
Municipal property taxes					
Transmission plant	$ 186,872	$ 198,872	$ 198,872	$ 198,872	$ 198,872
Storage area plant	16,777	16,777	16,777	19,465	19,465
Total	$ 203,649	$ 215,649	$ 215,649	$ 218,337	$ 218,337
Taxes on income					
Canadian government					
Net income - Page 1	(Loss $ 371,148)	(Loss $ 30,799)	$ 396,302	$ 519,909	$ 754,173
Add: Provision for taxes on income			52,225	518,740	743,800
Amortization of financing and organization costs not allowable for tax purposes	20,000	20,000	20,000	20,000	20,000
Profit subject to tax	(Loss $ 351,148)	(Loss $ 10,799)	$ 468,527	$ 1,058,649	$ 1,517,973
Loss carry forward for tax purposes	-	-	361,947	-	-
Amount on which tax calculated	(Loss $ 351,148)	(Loss $ 10,799)	$ 106,580	$ 1,058,649	$ 1,517,973
Tax thereon @ 49%	$ -	$ -	$ 52,225	$ 518,740	$ 743,800

Hearing Exhibit No. 61

(9644)

9644

UNION GAS COMPANY OF CANADA, LIMITED

Exhibit Schedule C

Statement of Utilization of Gas

(In thousands of cubic feet)	Fiscal years ended March 31 - Actual									Estimated for fiscal year ending March 31, 1955
	1946	1947	1948	1949	1950	1951	1952	1953	1954	
1. Ultimate Consumers										
2. Firm gas										
3. Non-heating										
4. Residential	1,872,030	1,945,083	1,988,704	1,906,607	1,855,751	1,930,448	1,978,028	2,033,943	2,158,192	2,293,000
5. Commercial	307,330	302,507	332,131	477,664	650,320	697,185	706,948	729,825	750,503	834,300
6. Industrial	-	-	-	-	-	-	-	-	-	-
7. Total non-heating	2,179,360	2,247,590	2,320,835	2,384,271	2,506,071	2,627,633	2,684,976	2,763,768	2,908,695	3,127,300
8. Space heating										
9. Residential	1,656,956	1,810,109	2,105,733	1,457,311	1,641,778	2,398,849	2,694,494	3,089,009	3,762,778	4,875,000
10. Commercial	246,003	229,382	309,130	242,153	185,959	266,506	274,708	280,377	386,884	420,000
11. Industrial	-	-	-	-	-	-	-	-	-	-
12. Total space heating	1,902,959	2,039,491	2,414,863	1,699,464	1,827,737	2,665,355	2,969,202	3,369,386	4,149,662	5,295,000
13. Total firm gas	4,082,319	4,287,081	4,735,698	4,083,735	4,333,808	5,292,988	5,654,178	6,133,154	7,058,357	8,422,300
14. Interruptible										
15. Industrial	1,015,457	994,648	1,178,695	1,351,751	1,250,145	1,538,477	1,435,130	1,672,369	1,853,097	1,650,000
16. Total to ultimate consumers	5,097,776	5,281,729	5,914,393	5,435,486	5,583,953	6,831,465	7,089,308	7,805,523	8,911,454	10,072,300
17. For resale										
18. Firm	37,789	1,965	52,513	67,109	205,643	769,623	1,104,336	690,727	1,149,429	1,300,000
19. Interruptible	-	-	-	-	-	-	-	-	-	-
20. Total	5,135,565	5,283,694	5,966,906	5,502,595	5,789,596	7,601,088	8,193,644	8,496,250	10,060,883	11,372,300
21. Company use and unaccounted for	370,396	538,882	388,612	301,185	677,806	733,624	876,304	674,293	764,293	800,000
22. Total annual gas requirements	5,505,961	5,822,576	6,355,518	5,803,780	6,467,402	8,334,712	9,069,948	9,170,543	10,825,176	12,172,300

9645

Exhibit
Schedule D

UNION GAS COMPANY OF CANADA, LIMITED
Gas Supply
For Fiscal Years Ending March 31

(In thousands of cubic feet)	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955
1. Local Natural Gas										
2. Union Co. Production	2,953,961	3,387,306	3,610,542	3,632,846	2,639,991	1,907,211	2,043,992	1,732,589	1,925,209	2,000,000
3. Local Purchases	141,372	77,721	66,022	61,325	103,996	108,300	120,817	160,038	251,928	500,000
4. Imperial Purchases	-	-	492,833	843,342	2,017,842	2,648,503	2,572,604	3,398,441	4,399,299	4,800,000
5. Total Local Production	3,095,333	3,465,027	4,169,397	4,537,513	4,761,835	4,664,014	4,737,413	5,291,068	6,576,436	7,300,000
6.										
7. Pipe Line Purchases										
8. Panhandle Eastern Pipeline	-	-	37,841	29,010	998,300	2,925,295	3,314,313	5,500,281	5,497,101	5,500,000
9.										
10.										
11. Total Natural Gas	3,095,333	3,465,027	4,207,277	4,566,523	5,760,135	7,589,309	8,051,726	10,791,349	12,073,537	12,800,000
12.										
13. Manufactured Gas (N.E.)										
14. Refinery Still Gas Pro.	2,247,186	2,236,071	1,967,520	2,141,049	2,106,059	1,662,529	1,315,295	-	-	-
15. Dayton Oil Gas	78,611	75,521	79,600	59,704	23,195	38,122	21,979	-	-	-
16. Propane Gas	67,591	33,682	35,436	40,650	6,323	30,167	22,041	-	-	-
17.										
18. Total Manufactured Gas	2,393,388	2,345,265	2,082,556	2,241,403	2,135,577	1,730,818	1,359,315	-	-	-
19.										
20. Total Gas Supply	5,488,721	5,810,292	6,289,794	6,807,926	7,895,712	9,320,127	9,411,041	10,791,349	12,073,537	12,800,000
21.										
22. To Storage	512,982	470,694	223,637	1,613,989	2,183,464	2,638,312	3,162,194	4,646,948	4,476,009	4,542,703
23. From Storage	530,222	482,978	289,361	609,843	755,155	1,652,897	2,821,101	3,026,142	3,227,648	3,915,003
24. Net to Storage	- 17,240	- 12,284	- 65,724	1,004,146	1,428,309	985,415	341,093	1,620,806	1,248,361	627,700
25. Total Gas Requirement (from Schedule C)	5,505,961	5,822,576	6,355,518	5,803,780	6,467,402	8,334,712	9,069,948	9,170,543	10,825,176	12,172,300
26.										
27. Purchased Gas in Storage at year end	83,948	71,664	5,940	1,010,086	2,438,395	3,423,810	3,764,903	5,385,709	6,634,070	7,261,770

(9646)

9646

Exhibit ____

Schedule E

UNION GAS COMPANY OF CANADA, LIMITED

GAS BALANCE PROJECTION

All Volumes in M.M.C.F.

Fiscal Years ending March 31st.

	Reserves Oct. 31, 1954	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965
1. Annual gas requirements		12,512	13,328	14,200	15,103	15,885	15,500	16,186	16,909	17,689	18,424
2.											
3. Union natural gas production	44,747	3,300	3,300	3,300	3,003	3,038	2,770	2,740	2,620	2,600	2,085
4.											
5. Local purchase natural gas											
6. Imperial Oil Limited	66,150	6,000	6,000	6,000	6,000	6,000	6,000	6,000	5,000	4,000	3,000
7. Consolidated West Petroleum Ltd.	8,400	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
8. Other local purchases	1,000	100	100	100	100	100	100	100	100	100	100
9. Total local purchases		7,100	7,100	7,100	7,100	7,100	7,100	7,100	6,100	5,100	4,100
10. Purchase from Ontario Natural											
11. Gas Storage and Pipelines											
12. Limited		2,112	2,928	3,800	5,000	5,747	5,630	6,346	8,189	9,989	12,239
13. Total Reserve	120,297										
14. Total Supply		12,512	13,328	14,200	15,103	15,885	15,500	16,186	16,909	17,689	18,424

Exhibit 9647
Schedule F

UNION GAS COMPANY OF CANADA, LIMITED

Summary of Natural Gas owned by Union and under contract to Union as at October 31, 1954 in M.M.C.F.
(exclusive of gas in operating storage pools)

UNION FIELDS			
Tilbury	7,323		
D'Clute	828		
Dover	483		
Chatham & Camden Gore	2,434		
Zone	5,920		
Dawn - Odd Pools	1,449		
Dawn 167	5,000		
Dawn 156	6,250	Gas down to storage cushion volume	
Mosald Pools	8,360		
Chatham Gore	1,000		
Enniskillen 26	250		
Enniskillen 28	-	This is a newly discovered reef pool, and we are unable to estimate reserve at present time.	
Waubuno (joint Union-Imperial Pool)	5,450		
Total: Union Reserves	44,747		44,747
PURCHASE CONTRACTS LOCAL NATURAL GAS			
Imperial Oil Limited			
Under agreement of December 15, 1952	60,700		

(5648)

S648

Exhibit
Schedule G

UNION GAS COMPANY OF CANADA, LIMITED

Union Production - Company's Own Fields

All Volumes in M.M.C.F.

Fiscal Years ending March 31st.

	Field	Reserves Oct. 31, 1954	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965
1.	Tilbury	7,323	780	752	730	712	692	670	650	630	610	595
2.	D'Clute	828	200	180	162	146	131	-	-	-	-	-
3.	Chatham & Camden Gore	2,434	100	100	100	200	200	200	200	200	200	200
4.	Zone	5,920	120	120	120	120	700	600	600	500	500	500
5.	Dover	483	60	60	55	55	45	40	40	40	40	40
6.	Mosald	8,360	500	480	480	218	470	460	450	450	450	450
7.	Old Dawn Pools	949)	1	1	1	100	100	100	100	100	100	100
8.	Dawn 176	500)	-	-	-	-	-	-	-	-	-	-
9.	Dawn 167	5,000	-	-	-	-	500	500	500	500	500	-
10.	Dawn 156	6,250(1)	1,539	1,607	1,652	1,452	-	-	-	-	-	-
11.	Waubuno	5,450	-	-	-	-	100	100	100	100	100	100
12.	Enniskillen 26	250	-	-	-	-	-	-	-	-	-	-
13.	Chatham Gore	1,000	-	-	-	-	100	100	100	100	100	100
14.	Enniskillen 28	?	-	-	-	-	-	-	-	-	-	-
15.	Totals	44,747(2)	3,300	3,300	3,300	3,003	3,038	2,770	2,740	2,620	2,600	2,085

Notes:

(1) Gas available for production to proposed minimum storage pressure.

(2) Exclusive of gas in operating Storage Pools.

Exhibit
Schedule H

UNION GAS COMPANY OF CANADA, LIMITED

Drilling Results by Years, 1945 to 30th September, 1954
in Kent, Lambton, Essex, Middlesex, Elgin, Huron & Bruce Counties
Showing Number of Dry Holes & Producers,
New Open Flow and New Reserves

	Year	Operator	Dry Holes	Producers	Open Flow M.C.F.	New Reserves M.M.C.F.	Total Reserves by Years M.M.C.F.
1.	1945	Union	16	16	11,103	4,000	
2.		Imperial	1	-	-	-	
3.		All Others	1	3	304	-	4,000
4.							
5.	1946	Union	19	21	6,883	1,000	
6.		Imperial	12	8	5,411	2,100	
7.		All Others	5	8	2,236	160	3,260
8.							
9.	1947	Union	14	3	643	100	
10.		Imperial	27*	12	12,455	2,000	
11.		All Others	12	6	2,047	140	2,240
12.							
13.	1948	Union	21	10	4,589	3,000	
14.		Imperial	25*	16	7,189	2,225	
15.		All Others	1	4	665	40	5,265
16.							
17.	1949	Union	13	15	3,958	6,500	
18.		Imperial	23*	18	62,366	25,000	
19.		All Others	6	2	464	-	31,500
20.							
21.	1950	Union	13	15	7,358	11,320	
22.		Union-Imperial	1	-	-	-	
23.		Imperial	25	13	21,713	14,136	
24.		Others	7	1	350	100	25,556
25.							
26.	1951	Union	13	3	1,974	1,500	
27.		Union-Imperial	-	1	7,400	13,000	
28.		Imperial	33	6	19,456	27,000	
29.		Others	8	-	-	-	41,500
30.							
31.	1952	Union	16	4	7,068	10,500	
32.		Imperial	34	8	55,330	10,501	
33.		Others	7	13	3,982	2,000	23,001
34.							
35.	1953	Union	24	6	8,134	2,500	
36.		Union Joint Wells	3	1	62,000	-	
37.		Imperial	47	6	22,060	1,000	
38.		Imperial deepened	-	2	43,000	-	
39.		Others	5	4	3,895	2,300	5,800
40.							
41.	Sept /54	Union	23	10	129,891	5,250	
42.		Union Joint Wells	10	3	53,380	-	
43.		Imperial	41	9	86,000(2)	12,200(2)	
44.		Imperial Joint Wells with others than Union	4	1	500	?	
45.		Others	13	3	6,168	? (1)	
46.		Totals	523	251	659,972	159,572	142,122

* Wells reported as dry holes include oil producers with very little gas.

(1) The three producers obtained were in Lake Erie, and are a part of the Tilbury Field. Union's reserves on land are decreased, and Consolidated West Petroleum's reserves in the lake are increased. It is probable that the total residual reserves of Tilbury Field will be increased.

(2) Estimated.

UNION GAS COMPANY OF CANADA, LIMITED

Exhibit
Schedule L

Statement of Estimated Utilization of Gas
(Assuming Operation of Ontario Natural Gas Storage and Pipelines Limited)
showing Estimated Number of Active Meters for the Periods

See Note A

		1st Year		2nd Year		3rd Year		4th Year		5th Year	
		M.C.F.	Active Meters	M.C.F.	Active Meters	M.C.F.	Active Meters	M.C.F.	Active Meters	M.C.F.	Active Meters
1.	Ultimate Consumers										
2.	Firm gas										
3.	Non-heating										
4.	Residential	2,394,000	82,700	2,504,000	86,500	2,620,000	90,500	2,739,000	94,600	2,858,000	98,750
5.	Commercial	847,800	7,850	864,000	8,000	880,200	8,150	893,700	8,275	907,200	8,400
6.	Industrial	1,831,500	1,075	1,930,500	1,100	2,029,500	1,125	2,128,500	1,150	2,227,500	1,175
7.	Total non-heating	5,073,300	91,625	5,298,500	95,600	5,529,700	99,775	5,761,200	104,025	5,992,700	108,325
8.	Space heating										
9.	Residential	5,340,000	(35,600)	5,850,000	(39,000)	6,390,000	(42,600)	6,960,000	(46,400)	7,410,000	(49,400)
10.	Commercial	480,000	(1,600)	525,000	(1,750)	585,000	(1,950)	645,000	(2,150)	705,000	(2,350)
11.	Industrial	18,500	(11)	19,500	(11)	20,500	(11)	21,500	(11)	22,500	(12)
12.	Total space heating	5,838,500	(37,211)	6,394,500	(40,761)	6,995,500	(44,561)	7,626,500	(48,561)	8,137,500	(51,762)
13.	Total firm sales	10,911,800	91,625	11,693,000	95,600	12,525,200	99,775	13,387,700	104,025	14,130,200	108,325
14.	Industrial gas - Interruptible	1,000,000	11	1,000,000	11	1,000,000	11	1,000,000	11	1,000,000	11
15.	Total to ultimate consumers	11,911,800	91,636	12,693,000	95,611	13,525,200	99,786	14,387,700	104,036	15,130,200	108,336
16.	For resale										
17.	Firm	-		-		-		-		-	
18.	Interruptible	-		-		-		-		-	
19.	Total sales	11,911,800	91,636	12,693,000	95,611	13,525,200	99,786	14,387,700	104,036	15,130,200	108,336
20.	Company use and unaccounted for	600,000		635,000		675,000		715,000		755,000	
21.	Total gas requirement	12,511,800		13,328,000		14,200,200		15,102,700		15,885,200	

Note A - It is assumed that all space heating customers will also use gas for non-heating purposes. For this reason the numbers of meters shown as space heating meters are included in the numbers of meters for non-heating customers and not added into final totals.

The increase in space heating meters will include some present non-heating customers as well as some of the new customers.

UNION GAS COMPANY OF CANADA, LIMITED

Exhibit Schedule M

Schedule showing Estimated Analysis of Sales by Markets

Fiscal Year ended March 31, 1952

(Volumes in thousands of cubic feet)	Estimated Population	Total Meters on Lines	Residential		Commercial		Industrial	
			Meters	Sales M.C.F.	Meters	Sales M.C.F.	Meters	Sales M.C.F.
1. City of Windsor	125,760	27,636	24,763	1,442,865	2,507	349,611	366	725,402
2. City of London	97,109	20,365	18,424	1,116,145	1,671	246,970	270	216,796
3. City of Chatham	21,730	6,823	6,074	510,725	672	105,302	77	33,894
4. City of Sarnia	37,480	6,850	6,132	378,754	672	91,151	46	85,214
5. Town of Essex	2,931	822	733	61,712	76	8,664	13	6,510
6. Town of Belle River	1,487	363	313	26,799	49	4,029	1	394
7. Town of Wallaceburg	7,355	2,330	2,102	176,809	203	23,371	25	283,586
8. Town of Petrolia	3,130	944	862	67,581	72	7,195	10	7,433
9. Village of Merlin	673	175	134	14,713	39	4,247	2	374
10. Town of Tilbury	2,920	771	640	62,037	117	13,563	14	21,162
11. Village of Comber	545	187	141	14,529	39	6,762	7	1,500
12. Town of Blenheim	2,598	865	753	69,958	107	13,310	5	1,208
13. Town of Ridgetown	2,280	843	747	69,624	84	8,603	12	3,225
14. Town of Dresden	2,140	771	644	58,360	114	13,266	13	6,106
15. Village of Sombra-Port Lambton	679	280	240	18,780	38	3,800	2	611
16. Village of Courtright	571	180	153	14,503	27	2,408	-	-
17. Village of Brigden	800	205	171	15,647	34	3,086	-	-
18. Village of Wyoming	777	201	173	12,090	26	2,568	2	79
19. Village of Inwood	320	94	72	5,762	22	1,926	-	-
20. Village of Alvinston	678	282	235	18,739	46	5,004	1	31
21. Town of Thamesville	950	371	295	28,787	68	8,636	8	730
22. Village of Bothwell	727	231	188	17,668	41	4,526	2	581
23. Village of Florence	390	84	63	6,074	20	1,655	1	615
24. Village of Glencoe	1,305	367	318	33,914	48	5,707	1	734
25. Village of Appin	275	59	50	4,034	9	722	-	-
26. Village of Mount Brydges	666	174	149	12,661	23	2,686	2	444
27. Village of Byron	550	120	109	8,511	10	1,126	1	334
28. Village of Wardsville	313	52	43	2,324	9	672	-	-
29. Village of Newbury	290	-	-	-	-	-	-	-
30. Village of Oil Springs	477	111	94	7,190	17	1,518	-	-
31. Townships - Windsor Area	30,838	1,002	931	63,791	62	6,794	9	5,193
32. Townships - All Other	74,519	4,290	3,988	331,436	234	32,778	68	32,974
33. Totals	423,263	77,848	69,734	4,672,522	7,156	981,656	958	1,435,130

Note - Estimated populations as per 1953 report, Department of Mines, Province of Ontario.

Total: Union Reserves	44,747		44,747

PURCHASE CONTRACTS LOCAL NATURAL GAS

Imperial Oil Limited			
Under agreement of December 15, 1952	60,700		
Union-Imperial Joint Waubuno Pool			
Imperial's share	5,450	Agreement being negotiated	
	66,150	66,150	
Consolidated West Petroleum			
Agreement being renegotiated		8,400	
Other small local purchases	1,000	1,000	
Total: Purchase local gas		75,550	75,550
Grand Total: All Local Sources			120,297

Note: Total stored gas above 375 p.s.i.a. formation pressure in Dawn Pools No. 59 and No. 49 not included in the above 7,820

Stored in Dawn No. 1 Pool 1

7,821

Oct. 31, 1954 - Actual amount of Inv Pressure 5939 M.mcf (to 4224)

UNION GAS COMPANY OF CANADA, LIMITED

Schedule showing Estimated Analysis of Sales by Markets

Fiscal Year ended March 31, 1953

Exhibit Schedule M

(Volumes in thousands of cubic feet)	Estimated Population	Total Meters on Lines	Residential		Commercial		Industrial	
			Meters	Sales M.C.F.	Meters	Sales M.C.F.	Meters	Sales M.C.F.
1. City of Windsor	125,760	28,886	25,988	1,689,039	2,512	351,005	386	814,245
2. City of London	97,109	20,752	18,701	1,152,778	1,778	256,237	273	265,922
3. City of Chatham	21,730	7,049	6,258	545,719	707	110,495	84	39,594
4. City of Sarnia	37,480	7,365	6,612	435,559	708	97,520	45	188,000
5. Town of Essex	2,931	871	779	67,099	79	7,886	13	6,805
6. Town of Belle River	1,437	378	324	28,443	53	4,483	1	197
7. Town of Wallaceburg	7,355	2,475	2,233	186,469	215	25,401	27	265,540
8. Town of Petrolia	3,130	985	899	74,425	75	7,114	11	6,938
9. Village of Merlin	673	189	146	14,453	41	4,565	2	389
10. Town of Tilbury	2,920	834	687	63,839	132	15,281	15	28,570
11. Village of Comber	545	192	145	13,843	40	6,161	7	1,523
12. Town of Blenheim	2,598	899	787	72,870	106	13,885	6	1,246
13. Town of Ridgetown	2,280	875	771	74,090	93	9,015	11	2,331
14. Town of Dresden	2,140	784	657	58,880	114	12,899	13	7,037
15. Village of Sombra-Port Lambton	679	299	255	20,143	41	4,338	3	702
16. Village of Courtright	571	187	161	15,409	26	2,054	-	-
17. Village of Brigden	800	207	170	14,515	37	3,478	-	-
18. Village of Wyoming	777	210	182	12,863	26	2,367	2	47
19. Village of Inwood	320	97	75	5,571	22	1,902	-	-
20. Village of Alvinston	678	284	236	18,569	46	5,757	2	148
21. Town of Thamesville	950	389	312	30,104	70	9,463	7	1,345
22. Village of Bothwell	727	239	197	18,393	39	4,793	3	546
23. Village of Florence	390	85	64	6,028	20	1,634	1	422
24. Village of Glencoe	1,305	370	322	33,375	46	5,400	2	793
25. Village of Appin	275	63	51	4,075	11	595	1	203
26. Village of Mount Brydges	666	137	102	13,227	23	2,751	2	372
27. Village of Byron	550	126	112	9,071	12	1,198	2	368
28. Village of Wardsville	313	94	79	7,150	15	1,808	-	-
29. Village of Newbury	290	60	57	2,689	3	232	-	-
30. Village of Oil Springs	477	115	96	7,980	19	1,533	-	-
31. Townships - Windsor Area	30,838	1,068	998	71,607	62	6,472	8	4,290
32. Townships - All Others	74,519	4,568	4,237	354,677	264	32,480	67	34,796
33. Totals	423,263	81,182	72,753	5,122,952	7,435	1,010,202	994	1,672,369

Note - Estimated populations as per 1953 Report, Department of Mines, Province of Ontario.

UNION GAS COMPANY OF CANADA, LIMITED

Exhibit Schedule M

Page 3 of 4 pages

Schedule showing Estimated Analysis of Sales by Markets

Fiscal Year ended March 31, 1954

(Volumes in thousands of cubic feet)	Estimated Population	Total Meters on Lines	Residential		Commercial		Industrial	
			Meters	Sales M.C.F.	Meters	Sales M.C.F.	Meters	Sales M.C.F.
1. City of Windsor	125,760	30,302	27,432	2,007,725	2,475	380,366	395	871,638
2. City of London	97,109	21,373	19,232	1,356,075	1,863	300,840	278	279,002
3. City of Chatham	21,730	7,550	6,690	609,006	775	130,783	85	56,630
4. City of Sarnia	37,480	7,612	6,875	523,023	691	103,756	46	256,952
5. Town of Essex	2,931	896	802	72,872	81	9,361	13	6,953
6. Town of Belle River	1,487	419	361	30,776	57	5,670	1	317
7. Town of Wallaceburg	7,355	2,561	2,306	203,037	223	28,251	32	273,986
8. Town of Petrolia	3,130	1,000	910	83,226	79	7,796	11	8,731
9. Village of Merlin	673	195	152	15,214	41	4,562	2	356
10. Town of Tilbury	2,920	898	755	70,021	128	17,492	15	29,919
11. Village of Comber	545	195	149	15,226	39	6,117	7	1,466
12. Town of Blenheim	2,598	938	823	79,495	109	15,647	6	1,404
13. Town of Ridgetown	2,280	903	794	79,683	96	9,981	13	2,804
14. Town of Dresden	2,140	815	685	62,195	116	13,076	14	9,425
15. Village of Sombra-Port Lambton	679	296	254	21,549	39	4,344	3	658
16. Village of Courtright	571	191	163	16,014	28	2,506	-	-
17. Village of Brigden	800	217	178	15,607	38	3,675	1	65
18. Village of Wyoming	777	222	193	13,969	28	4,042	1	17
19. Village of Inwood	320	100	76	6,542	24	1,723	-	-
20. Village of Alvinston	678	284	235	20,019	47	6,028	2	830
21. Town of Thamesville	950	409	333	31,830	69	10,052	7	1,690
22. Village of Bothwell	727	247	201	19,683	44	5,584	2	547
23. Village of Florence	390	87	67	6,412	19	1,738	1	274
24. Village of Glencoe	1,305	382	321	34,403	59	5,967	2	951
25. Village of Appin	275	65	54	4,752	10	597	1	375
26. Village of Mount Brydges	666	208	179	15,609	27	3,574	2	302
27. Village of Byron	550	143	124	10,237	17	1,684	2	473
28. Village of Wardsville	313	94	73	7,872	21	2,633	-	-
29. Village of Newbury	290	79	69	5,791	10	883	-	-
30. Village of Oil Springs	477	116	99	8,912	17	1,554	-	-
31. Townships - Windsor Area	30,838	1,118	1,041	83,132	68	6,785	9	4,523
32. Townships - All Other	74,519	4,715	4,361	391,063	268	40,320	86	42,809
33. Totals	423,263	84,630	75,987	5,920,970	7,606	1,137,387	1,037	1,853,097

Note - Estimated populations as per 1953 Report, Department of Mines, Province of Ontario.

UNION GAS COMPANY OF CANADA, LIMITED

Schedule showing Estimated Analysis of Sales by Markets

Fiscal Year ended March 31, 1955

Exhibit
Schedule M

(Volumes in thousands of cubic feet)	Estimated Population	Total Meters on Lines	Residential		Commercial		Industrial	
			Meters	Sales M.C.F.	Meters	Sales M.C.F.	Meters	Sales M.C.F.
1. City of Windsor	130,800	31,500	28,586	2,430,572	2,514	419,464	400	776,106
2. City of London	101,100	22,218	20,045	1,641,678	1,892	331,763	281	248,423
3. City of Chatham	22,600	7,848	6,975	737,269	787	144,226	86	50,423
4. City of Sarnia	39,000	7,913	7,164	633,177	702	114,421	47	228,790
5. Town of Essex	3,050	931	836	88,220	82	10,323	13	6,191
6. Town of Belle River	1,550	436	377	37,258	58	6,253	1	282
7. Town of Wallaceburg	7,650	2,662	2,403	245,799	227	31,155	32	243,957
8. Town of Petrolia	3,250	1,040	949	100,754	80	8,597	11	7,774
9. Village of Kerlin	700	203	159	18,418	42	5,031	2	317
10. Town of Tilbury	3,050	933	788	84,768	130	19,290	15	26,640
11. Village of Comber	550	203	156	18,433	40	6,746	7	1,305
12. Town of Blenheim	2,700	975	859	96,237	110	17,255	6	1,250
13. Town of Ridgetown	2,400	939	829	96,465	97	11,007	13	2,497
14. Town of Dresden	2,200	847	715	75,270	118	14,420	14	8,392
15. Village of Sombra-Port Lambton	700	308	265	26,087	40	4,791	3	586
16. Village of Courtright	600	198	170	19,387	28	2,764	-	-
17. Village of Brigden	850	226	186	18,894	39	4,053	1	58
18. Village of Wyoming	800	230	201	16,911	28	4,457	1	15
19. Village of Inwood	350	104	80	7,920	24	1,900	-	-
20. Village of Alvinston	700	295	245	24,235	48	6,648	2	739
21. Town of Thamesville	1,000	425	348	38,534	70	11,085	7	1,505
22. Town of Bothwell	750	257	210	23,828	45	6,158	2	487
23. Village of Florence	400	90	70	7,762	19	1,917	1	244
24. Village of Glencoe	1,350	397	335	41,649	60	6,580	2	847
25. Village of Appin	300	68	57	5,753	10	658	1	334
26. Village of Mount Brydges	700	216	186	18,896	28	3,941	2	269
27. Village of Byron	600	148	129	12,393	17	1,857	2	421
28. Village of Wardsville	350	98	75	9,530	22	2,904	-	-
29. Village of Newbury	300	82	72	7,011	10	974	-	-
30. Village of Oil Springs	500	121	104	10,789	17	1,714	-	-
31. Townships - Windsor Area	32,100	1,162	1,084	100,640	69	7,482	9	4,027
32. Townships - All Other	77,050	4,902	4,541	473,463	272	44,466	89	38,121
33. Totals	440,000	87,975	79,200	7,168,000	7,725	1,254,300	1,050	1,650,000

Note - Estimated populations based on those published in 1953 Report, Department of Mines, Province of Ontario.

UNION GAS COMPANY OF CANADA, LIMITED

Schedule showing Estimated Analysis of Sales by Markets

First Year of Ontario Natural Gas Storage and Pipelines Limited Operations

(Volumes in thousands of cubic feet)	Estimated Population	Total Meters on Lines	Residential		Commercial		Industrial	
			Meters	Sales M.C.F.	Meters	Sales M.C.F.	Meters	Sales M.C.F.
1. City of Windsor	133,200	32,807	29,842	2,622,490	2,555	444,045	410	870,178
2. City of London	102,950	23,140	20,929	1,771,305	1,923	351,204	288	278,534
3. City of Chatham	23,000	8,174	7,286	795,484	800	152,678	88	56,535
4. City of Sarnia	39,700	8,241	7,480	683,173	713	121,126	48	256,522
5. Town of Essex	3,100	970	873	95,186	83	10,928	14	6,941
6. Town of Belle River	1,600	454	394	40,200	59	6,619	1	316
7. Town of Wallaceburg	7,800	2,772	2,508	265,207	231	32,981	33	273,527
8. Town of Petrolia	3,300	1,083	991	108,710	81	9,101	11	8,716
9. Village of Merlin	700	211	167	19,872	42	5,326	2	355
10. Town of Tilbury	3,100	972	824	91,461	132	20,420	16	29,869
11. Village of Comber	550	211	163	19,888	41	7,141	7	1,463
12. Town of Blenheim	2,750	1,015	897	103,836	112	18,266	6	1,402
13. Town of Ridgetown	2,450	978	866	104,082	99	11,652	13	2,800
14. Town of Dresden	2,250	882	748	81,213	120	15,265	14	9,409
15. Village of Sombra-Port Lambton	700	320	276	28,147	41	5,072	3	657
16. Village of Courtright	600	206	178	20,918	28	2,926	-	-
17. Village of Brigden	850	235	194	20,386	40	4,291	1	64
18. Village of Wyoming	800	239	210	18,246	28	4,718	1	17
19. Village of Inwood	350	108	84	8,545	24	2,111	-	-
20. Village of Alvinston	700	308	257	26,149	49	7,038	2	829
21. Town of Thamesville	1,000	443	365	41,577	71	11,735	7	1,687
22. Town of Bothwell	750	267	219	25,710	46	6,519	2	546
23. Village of Florence	400	94	74	8,375	19	2,029	1	274
24. Village of Glencoe	1,400	414	351	44,938	61	6,966	2	950
25. Village of Appin	300	71	60	6,207	10	697	1	374
26. Village of Mount Brydges	700	225	195	20,388	28	4,172	2	302
27. Village of Byron	600	154	135	13,372	17	1,968	2	472
28. Village of Wardsville	350	102	80	10,282	22	3,074	-	-
29. Village of Newbury	300	85	75	7,565	10	1,031	-	-
30. Village of Oil Springs	500	126	109	11,541	17	1,814	-	-
31. Townships - Windsor Area	32,700	1,210	1,130	108,587	71	7,920	9	4,515
32. Townships - All other	78,550	5,108	4,740	510,860	277	46,967	91	42,746
33. Totals	448,000	91,625	82,700	7,734,000	7,850	1,327,800	1,075	1,850,000

Notes: 1. Estimated populations based on those published in 1953 Report, Department of Mines, Province of Ontario.

2. In addition to above firm sales, it is estimated that there will be a total of 1,000,000 M.C.F. of interruptible industrial sales.

UNION GAS COMPANY OF CANADA, LIMITED

Schedule showing Estimated Analysis of Sales by Markets

Second Year of Ontario Natural Gas Storage and Pipelines Limited Operations

(Volumes in thousands of cubic feet)	Estimated Population	Total Meters on Lines	Residential		Commercial		Industrial	
			Meters	Sales M.C.F.	Meters	Sales M.C.F.	Meters	Sales M.C.F.
1. City of Windsor	135,600	34,230	31,206	2,832,735	2,604	464,511	420	917,211
2. City of London	104,800	24,144	21,889	1,913,310	1,960	367,391	295	293,589
3. City of Chatham	23,400	8,529	7,624	859,258	815	159,715	90	59,591
4. City of Sarnia	40,400	8,598	7,822	737,943	727	126,709	49	270,387
5. Town of Essex	3,150	1,012	913	102,817	85	11,432	14	7,316
6. Town of Belle River	1,650	474	413	43,423	60	6,924	1	333
7. Town of Wallaceburg	7,950	2,892	2,623	286,469	235	34,501	34	288,311
8. Town of Petrolia	3,350	1,130	1,036	117,425	83	9,520	11	9,187
9. Village of Merlin	700	220	175	21,465	43	5,572	2	374
10. Town of Tilbury	3,150	1,014	863	98,793	135	21,361	16	31,483
11. Village of Comber	550	220	171	21,482	42	7,470	7	1,542
12. Town of Blenheim	2,800	1,059	939	112,161	114	19,108	6	1,478
13. Town of Ridgetown	2,500	1,020	906	112,426	101	12,189	13	2,951
14. Town of Dresden	2,300	920	784	87,724	122	15,969	14	9,918
15. Village of Sombra-Port Lambton	700	334	289	30,404	42	5,306	3	693
16. Village of Courtright	600	215	186	22,595	29	3,061	-	-
17. Village of Brigden	850	245	203	22,020	41	4,489	1	67
18. Village of Wyoming	800	249	219	19,709	29	4,935	1	18
19. Village of Inwood	350	113	89	9,230	24	2,208	-	-
20. Village of Alvinston	700	321	269	28,245	50	7,362	2	874
21. Town of Thamesville	1,000	462	383	44,910	72	12,276	7	1,778
22. Town of Bothwell	750	279	230	27,771	47	6,819	2	576
23. Village of Florence	400	98	78	9,046	19	2,121	1	289
24. Village of Glencoe	1,450	432	368	48,541	62	7,287	2	1,001
25. Village of Appin	300	74	63	6,705	10	729	1	394
26. Village of Mount Brydges	700	235	204	22,023	29	4,364	2	318
27. Village of Byron	600	161	142	14,444	17	2,059	2	498
28. Village of Wardsville	350	106	84	11,106	22	3,216	-	-
29. Village of Newbury	300	89	79	8,171	10	1,079	-	-
30. Village of Oil Springs	500	131	114	12,574	17	1,898	-	-
31. Townships - Windsor Area	33,300	1,262	1,181	117,292	72	8,285	9	4,759
32. Townships - All other	80,050	5,332	4,955	551,783	282	49,134	95	45,064
33. Totals	456,000	95,600	86,500	8,354,000	8,000	1,389,000	1,100	1,950,000

Notes: 1. Estimated populations based on those published in 1953 Report, Department of Mines, Province of Ontario.

2. In addition to the above firm sales it is estimated that there will be a total of 1,000,000 M.C.F. of interruptible industrial sales.

UNION GAS COMPANY OF CANADA, LIMITED

Schedule showing Estimated Analysis of Sales by Markets

Third Year of Ontario Natural Gas Storage and Pipelines Limited Operations

(Volumes in thousands of cubic feet)	Estimated Population	Total Meters on Lines	Residential		Commercial		Industrial	
			Meters	Sales M.C.F.	Meters	Sales M.C.F.	Meters	Sales M.C.F.
1. City of Windsor	138,000	35,725	32,642	3,055,175	2,653	489,994	430	964,246
2. City of London	106,650	25,198	22,899	2,063,553	1,997	387,546	302	308,644
3. City of Chatham	23,800	8,901	7,979	926,731	830	168,477	92	62,647
4. City of Sarnia	41,100	8,973	8,182	795,890	741	133,660	50	284,252
5. Town of Essex	3,200	1,056	955	110,891	87	12,059	14	7,691
6. Town of Belle River	1,700	495	433	46,833	61	7,304	1	350
7. Town of Wallaceburg	8,100	3,018	2,744	308,964	239	36,394	35	303,096
8. Town of Petrolia	3,400	1,179	1,083	126,646	85	10,042	11	9,658
9. Village of Merlin	700	230	184	23,151	44	5,878	2	393
10. Town of Tilbury	3,200	1,058	904	106,551	138	22,533	16	33,097
11. Village of Comber	550	230	180	23,169	43	7,880	7	1,621
12. Town of Blenheim	2,850	1,105	983	120,968	116	20,156	6	1,554
13. Town of Ridgetown	2,550	1,065	949	121,254	103	12,858	13	3,102
14. Town of Dresden	2,350	960	822	94,613	124	16,845	14	10,427
15. Village of Sombra-Port Lambton	700	349	303	32,791	43	5,597	3	729
16. Village of Courtright	600	224	194	24,369	30	3,229	-	-
17. Village of Brigden	850	256	213	23,749	42	4,735	1	70
18. Village of Wyoming	800	260	229	21,257	30	5,206	1	19
19. Village of Inwood	350	118	94	9,955	24	2,329	-	-
20. Village of Alvinston	700	335	282	30,463	51	7,766	2	919
21. Town of Thamesville	1,000	482	402	48,437	73	12,949	7	1,869
22. Town of Bothwell	750	291	241	29,952	48	7,193	2	606
23. Village of Florence	400	102	82	9,756	19	2,237	1	304
24. Village of Glencoe	1,500	450	385	52,353	63	7,687	2	1,052
25. Village of Appin	300	77	66	7,232	10	769	1	414
26. Village of Mount Brydges	700	245	213	23,752	30	4,603	2	334
27. Village of Byron	600	168	149	15,578	17	2,172	2	524
28. Village of Wardsville	350	111	89	11,978	22	3,392	-	-
29. Village of Newbury	300	93	83	8,813	10	1,138	-	-
30. Village of Oil Springs	500	137	120	13,561	17	2,002	-	-
31. Townships - Windsor Area	33,900	1,317	1,235	126,502	73	8,740	9	5,003
32. Townships - All other	81,550	5,567	5,181	595,113	287	51,830	99	47,379
33. Totals	464,000	99,775	90,500	9,010,000	8,150	1,465,200	1,125	2,050,000

Notes: 1. Estimated populations based on those published in 1953 Report, Department of Mines, Province of Ontario.

2. In addition to the above firm sales it is estimated that there will be a total of 1,000,000 M.C.F. of interruptible industrial sales.

UNION GAS COMPANY OF CANADA, LIMITED

Schedule showing Estimated Analysis of Sales by Markets

Fourth Year of Ontario Natural Gas Storage and Pipelines Limited Operations

(Volumes in thousands of cubic feet)	Estimated Population	Total Meters on Lines	Residential		Commercial		Industrial	
			Meters	Sales M.C.F.	Meters	Sales M.C.F.	Meters	Sales M.C.F.
1. City of Windsor	140,400	37,244	34,110	3,288,807	2,694	514,572	440	1,011,282
2. City of London	108,500	26,269	23,932	2,221,355	2,028	406,985	309	323,700
3. City of Chatham	24,200	9,279	8,342	997,599	843	176,928	94	65,703
4. City of Sarnia	41,800	9,354	8,551	856,752	752	140,364	51	298,118
5. Town of Essex	3,300	1,101	999	119,371	88	12,664	14	8,066
6. Town of Belle River	1,750	516	453	50,414	62	7,670	1	367
7. Town of Wallaceburg	8,250	3,146	2,867	332,591	243	38,220	36	317,881
8. Town of Petrolia	3,450	1,229	1,132	136,331	86	10,546	11	10,129
9. Village of Merlin	700	240	193	24,921	45	6,173	2	412
10. Town of Tilbury	3,250	1,103	947	114,699	140	23,663	16	34,711
11. Village of Comber	550	240	189	24,941	44	8,275	7	1,700
12. Town of Blenheim	2,900	1,152	1,028	130,219	118	21,167	6	1,630
13. Town of Ridgetown	2,600	1,110	992	130,526	105	13,503	13	3,253
14. Town of Dresden	2,400	1,001	861	101,848	126	17,690	14	10,936
15. Village of Sombra-Port Lambton	700	364	317	35,299	44	5,878	3	765
16. Village of Courtright	600	234	204	26,233	30	3,391	-	-
17. Village of Brigden	850	267	223	25,565	43	4,973	1	73
18. Village of Wyoming	800	271	240	22,883	30	5,467	1	20
19. Village of Inwood	350	123	99	10,716	24	2,446	-	-
20. Village of Alvinston	700	349	295	32,793	52	8,156	2	964
21. Town of Thamesville	1,000	502	421	52,141	74	13,599	7	1,960
22. Town of Bothwell	750	303	252	32,242	49	7,554	2	636
23. Village of Florence	400	106	86	10,502	19	2,349	1	319
24. Village of Glencoe	1,550	469	403	56,356	64	8,073	2	1,103
25. Village of Appin	300	80	69	7,785	10	808	1	434
26. Village of Mount Brydges	700	255	223	25,568	30	4,834	2	350
27. Village of Byron	600	175	156	16,769	17	2,281	2	550
28. Village of Wardsville	350	116	94	12,894	22	3,562	-	-
29. Village of Newbury	300	97	87	9,487	10	1,195	-	-
30. Village of Oil Springs	500	143	126	14,598	17	2,102	-	-
31. Townships - Windsor Area	34,500	1,373	1,290	136,176	74	9,178	9	5,247
32. Townships - All other	83,000	5,814	5,419	640,619	292	54,434	103	49,691
33. Totals	472,000	104,025	94,600	9,699,000	8,275	1,538,700	1,150	2,150,000

Notes: 1. Estimated populations based on those published in 1953 Report, Department of Mines, Province of Ontario.

2. In addition to the above firm sales it is estimated that there will be a total of 1,000,000 M.C.F. of interruptible industrial sales.

Exhibit 9667
Schedule N

UNION GAS COMPANY OF CANADA, LIMITED

Schedule showing Estimated Analysis of Sales by Markets

Fifth Year of Ontario Natural Gas Storage and Pipelines Limited Operations

(Volumes in thousands of cubic feet)	Estimated Population	Total Meters on Lines	Residential		Commercial		Industrial	
			Meters	Sales M.C.F.	Meters	Sales M.C.F.	Meters	Sales M.C.F.
1. City of Windsor	142,800	38,782	35,597	3,481,728	2,735	539,148	450	1,058,317
2. City of London	110,350	27,354	24,979	2,351,660	2,059	426,423	316	338,755
3. City of Chatham	24,600	9,662	8,710	1,056,118	856	185,378	96	68,759
4. City of Sarnia	42,500	9,740	8,925	907,009	763	147,068	52	311,983
5. Town of Essex	3,350	1,146	1,043	126,373	89	13,269	14	8,441
6. Town of Belle River	1,800	537	473	53,371	63	8,036	1	384
7. Town of Wallaceburg	8,400	3,276	2,992	352,101	247	40,045	37	332,666
8. Town of Petrolia	3,500	1,278	1,180	144,328	87	11,050	11	10,600
9. Village of Merlin	700	250	202	26,383	46	6,468	2	431
10. Town of Tilbury	3,300	1,149	991	121,427	142	24,793	16	36,325
11. Village of Comber	550	250	198	26,404	45	8,670	7	1,780
12. Town of Blenheim	2,950	1,200	1,074	137,858	120	22,178	6	1,706
13. Town of Ridgetown	2,650	1,156	1,036	138,183	107	14,148	13	3,404
14. Town of Dresden	2,450	1,042	900	107,822	128	18,535	14	11,445
15. Village of Sombra-Port Lambton	700	379	331	37,370	45	6,159	3	801
16. Village of Courtright	600	244	214	27,772	30	3,553	-	-
17. Village of Brigden	850	278	233	27,065	44	5,211	1	78
18. Village of Wyoming	800	282	251	24,225	30	5,728	1	21
19. Village of Inwood	350	128	104	11,345	24	2,563	-	-
20. Village of Alvinston	700	363	308	34,717	53	8,546	2	1,009
21. Town of Thamesville	1,000	523	441	55,200	75	14,248	7	2,051
22. Town of Bothwell	750	316	264	34,133	50	7,915	2	666
23. Village of Florence	400	110	90	11,118	19	2,461	1	334
24. Village of Glencoe	1,600	488	421	59,662	65	8,459	2	1,154
25. Village of Appin	300	83	72	8,242	10	847	1	454
26. Village of Mount Brydges	700	266	234	27,068	30	5,065	2	366
27. Village of Byron	600	182	163	17,753	17	2,390	2	576
28. Village of Wardsville	350	121	99	13,650	22	3,732	-	-
29. Village of Newbury	300	101	91	10,044	10	1,252	-	-
30. Village of Oil Springs	500	149	132	15,454	17	2,202	-	-
31. Townships - Windsor Area	35,100	1,430	1,346	144,164	75	9,616	9	5,491
32. Townships - All other	84,500	6,060	5,650	678,253	297	57,044	107	52,003
33. Totals	480,000	108,325	98,750	10,268,000	8,400	1,612,200	1,175	2,250,000

Notes: 1. Estimated populations based on those published in 1953 Report, Department of Mines, Province of Ontario.

2. In addition to above firm sales, it is estimated that there will be a total of 1,000,000 M.C.F. of interruptible industrial sales.

Hearing Exhibit No. 63

(9670)

9670

FEDERAL POWER COMMISSION
Docket No. G-1705, et al
Hearing Ex. No. 63
Date Identified 4/4/55
Date Admitted 4/28/55

Extract from the Minutes of the
HAMILTON CITY COUNCIL
as adopted November 30, 1954.

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Section twenty-seven of the Report of the Board of Control

27. WHEREAS the citizens of Hamilton are now being supplied with manufactured gas by United Gas and Fuel Company of Hamilton, Limited;

AND WHEREAS the increased cost of manufacturing gas has caused and it is anticipated will again cause an increase in the rates at which manufactured gas is sold to the citizens of Hamilton;

AND WHEREAS if a supply of natural gas can be obtain from sources in the United States, United Gas and Fuel Company of Hamilton, Limited represents that gas can be supplied to the citizens of Hamilton at a cost to them generally below the cost of manufactured gas and in such quantities as will permit gas to be used generally for house heating purposes;

AND WHEREAS it is in the public interest that the City of Hamilton do assist United Gas and Fuel Company of Hamilton, Limited in obtaining a supply of natural gas from sources in the United States;

BE IT THEREFORE RESOLVED that the Corporation of the City of Hamilton support in every reasonable way the efforts of United Gas and Fuel Company of Hamilton, Limited in obtaining a supply of natural gas from sources in the United States and that the City Solicitor be authorized to confer with representatives of United Gas and Fuel Company of Hamilton, Limited to determine the necessary changes to be made in the present franchise to enable the Company to proceed with their plans to obtain supply of natural gas.

Certified a True Copy

J. O. Berry

City Clerk.

UNITED FUEL INVESTMENTS, LIMITED
(Consolidated System)

Analysis of Utilization of Gas
(Natural Gas Basis)

Exhibit
Schedule E

(In Thousands of Cubic Feet)	Manufactured Gas Operations (A) Fiscal Years Ending March 31					Straight Natural Gas Operations				
	1951 Actual	1952 Actual	1953 Actual	1954 Actual	1955 Estimated	First Year	Second Year	Third Year	Fourth Year	Fifth Year
1. Ultimate consumers										
2. Firm gas										
3. Non-heating										
4. Residential	823,700	790,000	777,400	796,000	795,700	824,400	971,100	1,076,100	1,202,800	1,317,800
5. Commercial	236,600	223,400	220,000	226,400	226,600	234,100	275,400	311,300	336,400	366,600
6. Industrial	662,900	710,500	655,600	608,500	608,200	1,129,600	1,203,800	1,278,100	1,327,600	1,377,100
7. Total non-heating	1,723,200	1,723,900	1,653,000	1,630,900	1,630,500	2,188,100	2,450,300	2,665,500	2,866,800	3,061,500
8. Space heating										
9. Residential	164,800	203,700	195,700	193,300	193,100	941,500	1,553,700	2,166,600	2,656,300	3,146,600
10. Commercial	47,500	50,000	46,600	42,900	42,700	123,000	189,000	252,000	301,500	351,000
11. Industrial	6,700	7,200	6,600	6,100	6,100	11,400	12,000	12,900	13,400	13,900
12. Total space heating	219,000	260,900	248,900	242,300	241,900	1,075,900	1,754,700	2,431,500	2,971,200	3,511,500
13. Total firm gas	1,942,200	1,984,800	1,901,900	1,873,200	1,872,400	3,264,000	4,205,000	5,097,000	5,838,000	6,573,000
14. Interruptible										
15. Industrial	65,000	29,300	82,600	135,200	135,900	1,000,000	1,250,000	1,500,000	1,500,000	1,500,000
16. Total to ultimate consumers	2,007,200	2,014,100	1,984,500	2,008,400	2,008,300	4,264,000	5,455,000	6,597,000	7,338,000	8,073,000
17. Company use and unaccounted for, exclusive of gas used in production	40,036	70,880	128,300	18,415	101,247	175,000	200,000	225,000	225,000	225,000
18. Total gas requirements	2,047,236	2,084,980	2,112,800	2,026,815	2,109,547	4,439,000	5,655,000	6,822,000	7,563,000	8,298,000
19. Meters on lines end										
20. of fiscal periods:										
21. Residential	39,777	39,400	39,020	38,526	38,100	42,730	47,403	52,078	55,974	59,090
22. Commercial	2,293	2,219	2,099	2,054	2,150	2,320	2,575	2,830	3,045	3,215
23. Industrial	172	174	175	172	172	208	218	228	238	248
24. Total	42,242	41,793	41,294	40,852	40,422	45,258	50,196	55,136	59,257	62,553
25. Space heating meters										
26. included: line 21-Resid'l	1,100	1,200	1,300	1,400	1,400	6,405	10,571	14,738	18,071	21,405
27. line 22-Commercial	160	160	160	160	160	410	630	840	1,005	1,170
28. Total space heating meters	1,260	1,360	1,460	1,560	1,560	6,815	11,201	15,578	19,076	22,575

Notes:- (A) Actual volumes of sales 1951 and 1952 fiscal years of 530 B.T.U. manufactured gas and sales of 515 B.T.U. manufactured gas for 1953, 1954 and 1955 fiscal years converted to 1,000 B.T.U. natural gas equivalent.

(B) Industrial space heating sales estimated at approximately 1% of total firm industrial sales and all meters included in total on line 23.

(C) Residential and commercial space heating customers are also classified as base load customers. The space heating meters shown on lines 26 and 27 are therefore included in the "non-heating" classification and the total meters shown on line 24 includes those shown on line 28.

Exhibit
Schedule H

UNITED FUEL INVESTMENTS, LIMITED
(Consolidated System)

Schedule showing Estimated Analysis of Sales by Markets for First 5 Years of Natural Gas Operations

(Volumes in thousands of cubic feet)	Estimated Population	First Year of Natural Gas Operations: Total Meters on Lines	Residential and Commercial: Meters	Residential and Commercial: Sales MCF	Industrial: Meters	Industrial: Sales MCF	Second Year of Natural Gas Operations: Total Meters on Lines	Residential and Commercial: Meters	Residential and Commercial: Sales MCF	Industrial: Meters	Industrial: Sales MCF
1. City of Hamilton	235,788	39,045	38,874	1,773,766	171	1,880,400	43,305	43,128	2,497,477	177	2,168,000
2. Township of Trafalgar	10,500										
3. Township of Nelson	9,294										
4. Town of Oakville	8,809										
5. Village of Bronte	1,523										
6. Burlington Beach	3,528										
7.	33,654	2,851	2,826	170,477	25	250,000	3,162	3,135	240,033	27	285,000
8. Township of Saltfleet	12,231										
9. Township of Barton	4,165										
10. Village of Stoney Creek	3,150										
11.	19,546	1,208	1,206	73,244	2	600	1,340	1,337	103,127	3	1,800
12. Township of East Flamboro	9,158										
13. Township of West Flemboro	4,986										
14. Town of Burlington	7,192										
15. Village of Waterdown	1,634										
16.	22,970	561	561	26,962	-	-	622	622	37,963	-	-
17. Town of Dundas	7,738										
18. Township of Ancaster	7,804										
19.	15,542	1,593	1,583	78,551	10	10,000	1,767	1,756	110,600	11	11,000
20. Grand totals	327,500	45,258	45,050	2,123,000	208	2,141,000	50,196	49,978	2,989,200	218	2,465,800

21. Total sales per Schedule E	Non-heating Residential	824,400	Non-heating	1,129,600	Non-heating Resid'l.	971,100	Non-heating 1,203,800
22.	" " Commercial	234,100	Space "	11,400	" " Comm'l.	275,400	Space " 12,000
23.	Space heating Residential	941,500	Interrupt.	1,000,000	Space " Resid'l.	1,553,700	Interruptible 1,250,000
24.	" " Commercial	123,000			" " Comm'l.	189,000	
25.		2,123,000		2,141,000		2,989,200	2,465,800

Note -- Estimated population based on available 1953-1954 figures.

Exhibit
Schedule H

UNITED FUEL INVESTMENTS, LIMITED
(Consolidated System)

Schedule showing Estimated Analysis of Sales by Markets for First 5 Years of Natural Gas Operations

(Volumes in thousands of cubic feet)	Estimated Population	Third Year of Natural Gas Operations: Total Meters on Lines	Residential and Commercial: Meters	Residential and Commercial: Sales MCF	Industrial: Meters	Industrial: Sales MCF	Fourth Year of Natural Gas Operations: Total Meters on Lines	Residential and Commercial: Meters	Residential and Commercial: Sales MCF	Industrial: Meters	Industrial: Sales MCF
1. City of Hamilton	247,577	47,565	47,382	3,179,914	183	2,466,600	51,082	50,893	3,757,244	189	2,500,000
2. Township of Trafalgar	11,025										
3. Township of Nelson	9,759										
4. Town of Oakville	9,249										
5. Village of Bronte	1,599										
6. Burlington Beach	3,704										
7.	35,336	3,474	3,445	305,621	29	310,000	3,733	3,702	361,109	31	325,000
8. Township of Saltfleet	12,842										
9. Township of Barton	4,373										
10. Village of Stoney Creek	3,307										
11.	20,522	1,472	1,468	131,307	4	2,400	1,582	1,577	155,146	5	3,000
12. Township of East Flamboro	9,616										
13. Township of West Flamboro	5,235										
14. Town of Burlington	7,551										
15. Village of Waterdown	1,715										
16.	24,117	684	684	48,336	-	-	774	774	57,112	-	-
17. Town of Dundas	8,125										
18. Township of Ancaster	8,194										
19.	16,319	1,941	1,929	140,822	12	12,000	2,086	2,073	166,389	13	13,000
20. Grand totals	343,871	55,136	54,908	3,806,000	228	2,791,000	59,257	59,019	4,497,000	238	2,841,000

21. Total sales per Schedule E	Non-heating Residential	1,076,100	Non-heating	1,278,100	Non-heating Resid'l	1,202,800	Non-heat.	1,327,600
22.	" " Commercial	311,300	Space "	12,900	" " Commercial	336,400	Space "	13,400
23.	Space heating Residential	2,166,600	Interruptible	1,500,000	Space " Resid'l	2,656,300	Interrupt.	1,500,000
24.	" " Commercial	252,000			" " Commercial	301,500		
25.		3,806,000		2,791,000		4,497,000		2,841,000

Note -- Estimated population based on available 1953-1954 figures.

Exhibit
Schedule H

UNITED FUEL INVESTMENTS, LIMITED
(Consolidated System)

Schedule showing Estimated Analysis of Sales by Markets for First 5 Years of Natural Gas Operations

(Volumes in thousands of cubic feet)	Estimated Population	Fifth Year of Natural Gas Operations: Total Meters on Lines	Residential and Commercial: Meters	Residential and Commercial: Sales MCF	Industrial: Meters	Industrial: Sales MCF
1. City of Hamilton	259,956	53,965	53,770	4,329,562	195	2,533,400
2. Township of Trafalgar	11,576					
3. Township of Nelson	10,246					
4. Town of Oakville	9,711					
5. Village of Bronte	1,679					
6. Burlington Beach	3,889					
7.	37,101	3,940	3,907	416,114	33	340,000
8. Township of Saltfleet	13,484					
9. Township of Barton	4,592					
10. Village of Stoney Creek	3,472					
11.	21,548	1,670	1,664	178,779	6	3,600
12. Township of East Flamboro	10,096					
13. Township of West Flamboro	5,497					
14. Town of Burlington	7,929					
15. Village of Waterdown	1,800					
16.	25,322	776	776	65,811	-	-
17. Town of Dundas	8,531					
18. Township of Ancaster	8,604					
19.	17,135	2,202	2,188	191,734	14	14,000
20. Grand totals	361,062	62,553	62,305	5,182,000	248	2,891,000

21. Total sales per Schedule E	Non-heating Residential	1,317,800	Non-heating	1,377,100
22.	" " Commercial	366,600	Space "	13,900
23.	Space heating Residential	3,146,600	Interruptible	1,500,000
24.	" " Commercial	351,000		
25.		5,182,000		2,891,000

Note -- Estimated population based on available 1953-1954 figures.

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Exhibit _____
Schedule L

UNITED FUEL INVESTMENTS, LIMITED

(Consolidated System)

Trend of Competitive Fuel Prices in Hamilton Area
as of July 1, 1945-1954 inclusive

Kind of Fuel	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	Equivalent gas price per M.C.F. (1,000 B.T.U. gas)
Coal - per ton											
Bituminous:											
Stoker	$ 9.75	$ 9.75	$14.50	$16.75	$16.10	$17.80	$17.50	$17.00	$17.50	$16.75	$ 0.716
Pocahontas - stove nut	12.75	12.75	16.75	18.50	19.00	20.75	20.75	20.50	21.50	21.25	0.985
Industrial Range	8.29 to 9.93	8.29 to 10.09	8.95 to 12.70	10.20 to 14.50	9.55 to 13.85	10.55 to 15.25	10.70 to 14.70	10.25 to 14.00	10.45 to 13.45	10.10 to 12.95	0.388 to 0.497
Anthracite:											
Stove	15.50	15.50	17.50	20.50	20.50	23.00	25.00	25.00	26.00	24.50	1.151
Buckwheat	11.50	11.50	13.00	14.75	15.00	17.00	18.00	18.50	20.00	20.00	0.868
Coke - per ton											
Stove	13.00	13.00	16.75	18.50	17.75	20.25	24.25	22.00	24.00	19.75	0.915
Buckwheat	11.00	11.00	11.00	12.00	11.50	12.25	13.50	14.00	14.50	14.50	0.620
Fuel Oils - per Imperial Gallon											
Tank Car Lots:											
Bunker "C"	6.38¢	6.38¢	8.40¢	12.18¢	10.48¢	10.53¢	11.03¢	12.28¢	10.18¢	10.18¢	$ 0.566
Medium industrial	8.75¢	8.75¢	11.70¢	15.00¢	13.00¢	14.00¢	13.50¢	14.20¢	13.30¢	14.20¢	0.835
Tank Wagon Lots:											
Bunker "C"	6.48¢	6.48¢	8.50¢	12.28¢	10.58¢	10.63¢	11.13¢	12.38¢	10.28¢	10.28¢	0.571
Medium fuel oil	8.85¢	8.85¢	11.80¢	15.10¢	13.10¢	14.10¢	13.60¢	14.30¢	13.40¢	14.30¢	0.840
Domestic heating oil	10.75¢	10.75¢	14.25¢	17.50¢	16.30¢	16.40¢	17.40¢	18.10¢	17.40¢	17.90¢	1.183
Stove oil	13.65¢	13.65¢	17.15¢	20.40¢	19.20¢	19.30¢	20.30¢	21.00¢	20.30¢	20.80¢	1.393
Bunker "C" by Boat:	6.36¢	6.36¢	7.13¢	12.19¢	9.51¢	9.51¢	10.04¢	11.01¢	10.06¢	9.46¢	0.525
Liquid Petroleum Gas - per Imperial Gallon											
Tank Car Lots:											
Propane	10.80¢	11.23¢	N.A.	N.A.	N.A.	10.90¢	N.A.	N.A.	N.A.	11.03¢	1.003
Butane	N.A.	N.A.	10.74¢	22.09¢	17.56¢	N.A.	14.58¢	13.94¢	N.A.	11.03¢	0.898

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Hearing Exhibit No. 65

CONTRACT

BETWEEN

PANHANDLE EASTERN PIPE LINE COMPANY

AND

UNION GAS COMPANY OF CANADA, LIMITED

FOR SALE AND PURCHASE OF GAS

9694

THIS AGREEMENT, made and entered into this 25th day of November, 1944, by and between PANHANDLE EASTERN PIPE LINE COMPANY, a corporation of the State of Delaware, U. S. A., hereinafter referred to as "Seller", and UNION GAS COMPANY OF CANADA, LTD., a corporation of the Province of Ontario, Canada, hereinafter referred to as "Buyer", witnesseth:

Seller owns and operates a natural gas transmission system used in the transmission and sale of natural gas which it produces and purchases in the gas production areas of the states of Texas, Oklahoma, and Kansas. Said transmission system extends to a point near the City of Detroit, Michigan, designated as Melvindale on the map attached hereto and marked "Exhibit A". Seller has available at a point designated on Exhibit A as Lincoln Park during the Summer and certain Spring and Fall months a supply of gas over and above that required to fulfill its firm obligations a portion of which Seller desires to sell and deliver to Buyer at a point on the international boundary between Canada and the United States of America designated on Exhibit A as "point of delivery".

Buyer owns and operates a natural gas transmission and distribution system located in the Province of Ontario,

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Canada, and shown on Exhibit A, used in the transmission and sale of natural gas to consumers in Windsor and other communities in the Province of Ontario. Buyer desires to augment its present supply of gas by purchasing from Seller at the aforesaid point of delivery gas which Seller has available for sale during the Summer and certain Spring and Fall months and by storing for winter use as much of said gas as can be made available for the purpose in Buyer's gas storage facilities shown on Exhibit A and designated as the "Dawn Field."

Now, THEREFORE, in consideration of the mutual covenants and agreements of the parties hereto as herein set forth, the parties hereto covenant and agree as follows:

ARTICLE I

Conditions Precedent

This agreement shall be null and void and of no effect if the following conditions are not satisfied and performed as herein specified and within the time herein limited:

1. Buyer shall have obtained on or before February 15th, 1945, all such governmental approval as may be requisite to enable it to put into effect rates for the sale of its gas in the Province of Ontario, which will make it economically possible for the Buyer to proceed with this purchase. Such rates in Canadian funds would require to be not less than the following with provision for adjustment of rates for gas over the first 3000 cubic feet per month per meter to provide for variations in the cost of gas in accordance with paragraph numbered 3 of Article IV of this agreement.

Rates in Canadian Funds for consumption in each monthly billing period:

Note:— C.F. means Cubic Feet;
C.C.F. means Hundred Cubic Feet;
M.C.F. means Thousand Cubic Feet.

Domestic and Commercial		Gross	Net
First	200 C.F.	50¢ per C.C.F.	50¢ per C.C.F.
Next	9800 C.F.	80¢ per M.C.F.	75¢ per M.C.F.
Over	10000 C.F.	65¢ per M.C.F.	60¢ per M.C.F.

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Industrial			
First	200 C.F.	50¢ per C.C.F.	50¢ per C.C.F.
Next	99800 C.F.	80¢ per M.C.F.	75¢ per M.C.F.
Over	100000 C.F.	70¢ per M.C.F.	65¢ per M.C.F.

This condition is for the benefit of the Buyer and shall not be deemed to have been satisfied unless and until Buyer notifies Seller in writing that all such necessary approval has been obtained.

2. On or before the 15th day of February, 1945, the Buyer shall have secured from the proper authorities the exemption of purchases under this contract from the War Exchange Tax payable under Section 88A of the Special War Revenue Act as the same was enacted by Section 11, Chapter 41, Statutes of Canada, 4 Geo. VI, and all such approvals as may be required under the laws and regulations of the Dominion of Canada and Province of Ontario, or any county, township or municipality in such province, in connection with the construction and operation by Buyer of the facilities necessary to accept delivery of gas hereunder. This condition is for the benefit of the Buyer and shall not be deemed to have been satisfied unless and until Buyer notifies Seller in writing that such necessary exemption and approvals have been obtained.

3. On or before the 15th day of April, 1945 Seller shall have obtained all such governmental approval as may be required under the laws of the United States of America, any State thereof, or any political subdivision of a State thereof, in connection with the sale and delivery of gas hereunder and the construction and operation by Seller of facilities necessary to make delivery thereof. This condition is for the benefit of

Seller and shall not be deemed to have been satisfied unless and until Seller notifies Buyer in writing that all such necessary approval has been obtained.

4. It is understood and agreed that Seller and Buyer shall proceed promptly and with due diligence to procure the requisite approvals and exemptions referred to in paragraphs 1, 2 and 3 of this Article I of this agreement.

5. When each of the parties has notified the other in writing that the foregoing conditions for its benefit have been satisfied or waived, this Article I of this agreement shall be of no further force and effect.

Article II

Facilities

When all conditions precedent to the effectiveness of this agreement set forth above in Article I have been satisfied, the parties hereto will promptly proceed with the construction of facilities for delivery and receipt of the gas to be sold hereunder as follows:

1. Seller will construct a 16 inch O. D. pipe line extending from a point on its present transmission system at or near Detroit, Michigan, to a point on the United States side of the Detroit River designated as "Seller's crossing"

on Exhibit A, there to connect with a river crossing herein provided for.

2. Buyer will construct a 12¾ inch O. D. pipe line extending from a point on its present transmission line at or near Windsor, Province of Ontario, Canada, to a point on the Canadian side of the Detroit River designated as "Buyer's crossing" on Exhibit A, there to connect with a river crossing herein provided for.

3. A submerged river crossing composed of two 12¾

inch O. D. pipe lines shall be constructed from the point on the United States side of the Detroit River mentioned in paragraph 1 above to the point on the Canadian side of the Detroit River mentioned in paragraph 2 above. The portion of said river crossing extending from the United States side of the Detroit River to the international boundary between Canada and the United States of America shall be constructed and owned by Seller, and the portion of said river crossing extending from said international boundary to the Canadian side of the Detroit River shall be constructed and owned by Buyer. To facilitate the construction of said river crossing, the parties will mutually agree upon a plan for unified supervision and operation in the construction of said river crossing, dividing the expense thereof proportionately according to the interest and ownership of each therein.

4. Buyer will reinforce its existing transmission system and facilities for the reception of deliveries of gas contemplated hereunder by the installation of the following additional facilities shown on Exhibit A attached hereto:

(a) A 12¾ inch O. D. pipe line from a point on its present transmission line at or near Windsor, Ontario to a point in the Dawn Field.

(b) Such natural gas compressor facilities as may be necessary to enable Buyer to receive the quantities of gas deliverable hereunder as herein provided.

(c) Other pipe lines and facilities to make it possible to carry out the terms and provisions of this contract.

5. Seller will install all additional facilities in its transmission system necessary to enable it to deliver to Buyer at the point of delivery as herein provided the quantities of gas to be sold under this agreement.

Article III

Sale and Purchase

Seller agrees to transport, sell, and deliver to Buyer, and Buyer agrees to purchase and receive from Seller, at the point of delivery herein provided, natural gas at the price and in the quantities herein providde, subject to all of the terms and conditions hereof.

Article IV

Price and Computation of Bills

1. For all gas sold and purchased hereunder the price shall be as follows: twenty-five cents (25¢), coin of the United States of America, per thousand cubic feet (M.C.F.) (herein called the "contract price") subject to increase or decrease in accordance with variations in the heating value of the gas delivered hereunder, as set forth in paragraph numbered 2 of this Article IV and in accordance with variations in the price of coal, as set forth in paragraph numbered 3 of this Article IV.

2. It is contemplated that the gas to be delivered hereunder will have a total heating value of one thousand British thermal units (1000 B.t.u.) per cubic foot, but it is understood that, due to unforeseen circumstances, the actual heating value may vary above or below that figure from time to time. Accordingly, whenever, during any month, the average heating value of the gas delivered hereunder shall exceed one thousand twenty-five British thermal units (1025 B.t.u.) per cubic foot or shall be less than nine hundred seventy-five British thermal units (975 B.t.u.) per cubic foot, the price for such gas delivered during said month shall be that price which has the same ratio to the "contract price" which the average

heating value measured in British thermal units per cubic foot has to one thousand British thermal units (1000 B.t.u.). It is understood and agreed that, if the "contract price" shall be inapplicable by reason of the operation of the provisions of paragraph numbered 3 of this Article IV, the applicable price shall be used in computations under this paragraph 2 instead of the "contract price".

3. Whenever, for the period of two months immediately preceding the current billing month during the life of this contract, the average mean f.o.b. mine net ton price of Pocahontas and New River straight mine-run coal (as quoted for the Chicago market) plus the then current freight rate, including tax thereon, from Pocahontas and New River mines to Toledo, Ohio, (the sum of these being herein referred to as the 'current coal price') shall be greater than six dollars and fourteen cents ($6 14) or less than five dollars and fifteen cents ($5.15), coin of the United States of America, then, subject to the provisions of paragraph numbered 2 of this Article IV, the price for all gas delivered during the current billing month shall be

greater or less than the 'contract price' in accordance with the applicable 'current coal price' as set forth in the table below:

When the "Current Coal Price" Is Within the Range	The Price Shall Be
from $6.15 to $6.39 inclusive	$.27 per M.C.F.
from $6.40 to $6.64 inclusive	$.28 per M.C.F.
from $6.65 to $6.89 inclusive	$.29 per M.C.F.
from $6.90 to $7.14 inclusive	$.30 per M.C.F.
from $5.14 to $4.90 inclusive	$.23 per M.C.F.
from $4.89 to $4.65 inclusive	$.22 per M.C.F.
from $4.64 to $4.40 inclusive	$.21 per M.C.F.
from $4.39 to $4.15 inclusive	$.20 per M.C.F.

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Notwithstanding the above provisions, the price for gas sold and delivered under this contract shall never be more than thirty cents ($0.30) per M.C.F. nor less than twenty cents ($0.20) per M.C.F., coin of the United States of America; subject, however, to the provisions of paragraph 2 of this Article IV.

In determining the "current coal price", quotations used shall be those published in the "Chicago Journal of Commerce" and, in the event that, for any reason, applicable quotations are not published therein, quotations for coal of like grade and quality published in "The Black Diamond" shall be used. In the event that, for any reason, the applicable coal quotations do not appear in either of the publications mentioned above, the Seller and Buyer cannot agree upon the amount of the "current coal price", then, Seller and Buyer shall each name a disinterested arbitrator and such arbitrators shall agree upon a disinterested third party as a third arbitrator, and the amount of the "current coal price," as a question of fact, shall be determined by the arbitrators so appointed. The written, signed decision of a majority of said arbitrators shall be

final and binding upon Buyer and Seller. The expense of such arbitration shall be borne one-half by the Buyer and one-half by the Seller. Such arbitration shall be a condition precedent to the bringing of any suit or action at law between the Buyer and Seller in which the amount of the "current coal price" is an issue because the applicable coal quotations do not appear in either of the publications mentioned above.

ARTICLE V

Quantity

1. Promptly upon the completion of the facilities mentioned above in Article II hereof, Seller will com-

mence deliveries of gas hereunder and thereafter, during the term of this agreement, Seller will deliver and Buyer will receive natural gas at the prices and subject to all of the terms and conditions hereof in the following quantities:

(a) During each twelve month period throughout the life of this contract and any renewal or extension thereof, five billion five hundred million cubic feet (5,500,000,000 CF).

(b) Such quantities of natural gas in addition to those set forth in sub-paragraph (a) above as Seller, upon specific request of Buyer, may elect to deliver up to, but not exceeding, fifteen per cent (15%) of the quantities provided in sub-paragraph (a) above.

2. The quantities of gas above provided for may be delivered in such daily quantities as Seller, in its sole judgment and discretion, may elect to deliver, provided, however, the quantity to be delivered during any one day

shall not exceed thirty-three million cubic feet (33,000,000 CF) unless Buyer has agreed to accept a greater quantity during such day.

3. It is distinctly understood and agreed that, in every year throughout the life of this agreement, Seller shall be under no obligation to deliver any gas to Buyer during the months of January, February, March, and December.

ARTICLE VI

Quality

1. Seller agrees that the gas delivered hereunder shall be natural gas; provided, however, that:

(a) Seller may extract or permit the extraction of moisture, helium, natural gasoline, butane, propane, or other hydro-carbons (except methane) from said natural gas.

(b) Seller may increase or decrease the heat content of said natural gas before delivery thereof to Buyer; provided that such increase or decrease will not result in a total heating value above one thousand sixty (1060) or below nine hundred fifty (950) British thermal units per cubic foot.

(c) Seller may subject, or permit the subjection of, said natural gas to compression, cooling, cleaning or other processes to such an extent as may be required in its transmission from the wells to the point of delivery.

2. Seller agrees that the gas delivered hereunder shall be merchantable, and in so far as practicable:

(a) Shall be commercially free from solid or liquid matter, dust, gum, or gum-forming constituents;

(b) Shall not contain more than one (1) grain of hydrogen sulphide per one hundred (100) cubic feet;

(c) Shall not contain more than twenty (20) grains of total sulphur per one hundred (100) cubic feet;

(d) Shall not contain an amount of moisture exceeding that corresponding to saturation at the temperature and pressure of the gas in the pipe line at a point approximately fifty (50) feet in advance of the meter inlet header located at or near the point of delivery, and water shall not be present in liquid phase.

Article VII

Measurements

The volume and total heating value of the gas delivered hereunder shall be determined as follows:

(a) The unit of volume, for the purpose of measurement and for the determination of total heating value, shall be one (1) cubic foot of gas saturated with water vapor at a temperature of sixty (60) degrees Fahrenheit and an absolute pressure equiv-

alent to that of thirty (30) inches of mercury at thirty-two (32) degrees Fahrenheit.

(b) The total heating value of the gas, per cubic foot, shall be determined by taking the arithmetic average of the heating value as recorded by the recording calorimeter of Seller located at its Detroit Measuring Station or at such other place as may be agreed upon between the parties. The arithmetic average for each month of the calorimeter recordings shall be used in computing heating values.

(c) The average absolute atmospheric pressure shall be assumed to be fourteen and four-tenths (14.4) pounds to the square inch, irrespective of actual elevation of location of the point of delivery above sea level or variations in such atmospheric pressure from time to time.

(d) The temperature of the gas passing the meters shall be determined by the continuous use of a recording thermometer so installed that it may properly record the temperature of the gas flowing through the meters. The arithmetic average of the temperature recorded each twenty-four (24) hour day shall be used in computing gas volumes.

(e) The specific gravity and relative humidity of the gas delivered hereunder shall be determined, by approved methods, at the beginning of delivery of gas and with such reasonable frequency thereafter as is found necessary in practice.

(f) The deviation from Boyle's Law of the gas delivered hereunder shall be determined, by approved methods, at the beginning of delivery of gas and with such reasonable frequency thereafter as is found expedient in practice.

Article VIII

Measuring Equipment

1. Seller will install, maintain and operate, at its own

expense, at that point on its transmission facilities which Seller determines to be practicably nearest to the point of delivery, a meter or meters and other necessary measuring equipment by which the volume of gas delivered hereunder shall be measured.

2. If line loss due to breakage or abnormal leakage occurs between Seller's meter and the point of delivery, i.e., while the gas is still in the possession of Seller as provided in Article XII of this agreement, the amount of such line loss shall be deemed to have been not delivered.

3. Buyer may install, maintain and operate, at its own expense, at a point on its transmission facilities determined to be practicably the nearest to the point of delivery, such check measuring equipment as it shall desire, provided that such equipment shall be so installed as not to interfere with the operation of Seller's measuring equipment provided under paragraph 1 of this Article VIII herefo. Seller shall have access to such check measuring equipment at all reasonable hours, but the reading, calibrating and adjusting thereof and the changing of charts shall be done only by Buyer.

4. Each party shall have the right to be present at the time of any installing, reading, cleaning, changing, repairing, inspecting, testing, calibrating, or adjusting done in connection with the other's measuring equipment, and each party shall advise the other of any intended major maintenance operation sufficiently in advance in order that the other party may conveniently have its representative present. The records from such measuring equipment shall remain the property of the owner, but each party, upon request, will submit to the other its records and charts, together with calculations therefrom, for inspection and verification, subject to return within ten (10) days after receipt thereof.

5. All installations of measuring equipment used in connection with deliveries hereunder shall be made in such manner as to permit an accurate determination of the

quantity of gas delivered and ready cerification of the accuracy of measurement. Reasonable care shall be exercised by each party in the installation, maintenance and operation of pressure regulating equipment so as to avoid, so far as practicable, any inaccuracy in the determination of the volume of gas delivered hereunder.

6. In the event Seller's meter is out of service, or registering inaccurately, the volume of gas delivered hereunder shall be estimated as follows:

(a) By using the registration of any check meter or meters if installed and accurately registering in accordance with the provision of Article VII of this agreement.

(b) If there be no check meter or if any check meter is not registering accurately, then by correcting the error if the percentage of error is ascertainable by calibration, test, or mathematical calculation.

(c) If an estimate cannot be made under either sub-paragraph (a) or sub-paragraph (b) of this paragraph 6 of Article VIII hereof, then, by computation based on volumes delivered under similar conditions during periods when Seller's meter was registering accurately.

7. The accuracy of Seller's measuring equipment shall be verified by Seller at reasonable intervals, and, if requested, in the presence of representatives of Buyer, but Seller shall not be required to verify the accuracy of such equipment more frequently than once in any thirty (30) day period. In the event either party shall notify the other that it desires a special test of any measuring

equipment, the parties shall cooperate to effect such test promptly.

8. If, upon test, any measuring equipment, including recording calorimeter, is found to be in error not more than two (2) per cent, previous recordings of such equipment shall be considered correct in computing deliveries hereunder; but such equipment shall be adjusted at once to record accurately. If, upon test, any measuring equipment shall be found to be inaccurate by an amount exceeding two (2) per cent, at a recording corresponding to the average hourly rate of flow for the period since the last preceding test, then any previous recordings of such equipment shall be corrected to zero error for any period which is known definitely or agreed upon, but in case the period is not known definitely or agreed upon, such correction shall be for a period extending over one-half of the time elapsed since the date of last test, not exceeding a correction period of sixteen (16) days.

9. Each party shall preserve for a period of at least five (5) years all test data, charts and other similar records.

Article IX

Billing

1. Seller shall render bills on or before the tenth day of each month for all gas delivered hereunder during the preceding month.

2. Both Seller and Buyer shall have the right to examine, at reasonable times, books, records, and charts of the other to the extent necessary to verify the accuracy of any statement, charge, or computation made under or pursuant to any of the provisions of this agreement.

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ARTICLE X

Payments

1. Buyer agrees to pay Seller, in monetary form satisfactory to Seller, at Seller's designated office, on or before the twentieth day of each month, for the natural gas delivered hereunder during the preceding month, as billed by Seller in its statement to Buyer for such month, according to the measurements, computations and prices herein provided.

2. Should Buyer fail to pay the amount of any bill for gas delivered hereunder when such amount is due, as herein provided, interest thereon shall accrue at the rate of six (6) per cent per annum from the due date until the date of payment. If such failure to pay continues for thirty (30) days after payment is due, Seller, in addition to any other remedy it may have hereunder or otherwise, may suspend further delivery of gas until such amount is paid; provided, however, that if Buyer, in good faith, shall dispute the amount of any such bill or parts thereof and shall pay to Seller such amount as it concedes to be correct and at any time thereafter within thirty (30) days of a demand made by Seller shall furnish a good and sufficient surety bond, in amount and with sureties satisfactory to Seller, conditioned upon the payment of any amount ultimately found due upon such bill after a final determination which may be reached either by agreement or adjustment of the courts as may be the case, then Seller shall not be entitled to suspend further delivery of gas unless and until default be made in any of the conditions of such bond.

3. If presentation of a bill by Seller is delayed after the tenth day of the month, then the time of payment shall be extended accordingly unless Buyer is responsible for such delay.

4. In the event that an error is discovered in the amount billed in any statement rendered by Seller to Buyer, such error shall be adjusted within thirty (30) days of the determination thereof, provided that claim therefor shall have been made within sixty (60) days from the date of discovery of such error, but in any event within twelve (12) months from the date of such statement.

Article XI

Point of Delivery

The point of delivery for all gas to be delivered by Seller to Buyer hereunder shall be at the point where the facilities of Seller connect with those of Buyer, which point shall be the point at which the international boundary line between Canada and the United States intersects the river crossing mentioned in paragraph 3 of Article II of this agreement.

Article XII

Possession of Gas

1. As between the parties hereto, Seller shall be deemed to be in control and possession of the gas deliverable hereunder until it shall have been delivered to Buyer at the point of delivery, as defined in Article XI of this agreement, after which Buyer shall be deemed to be in control and possession thereof.

2. Buyer shall have no responsibility with respect to any gas deliverable hereunder until it is delivered to Buyer or on account of anything which may be done, happen or arise with respect to said gas before such delivery, and Seller shall have no responsibility with respect to such gas after its delivery to Buyer or on account of

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EXHIBIT "A"

PANHANDLE EASTERN PIPE LINE CO.

GENERAL MAP
SHOWING LAYOUT OF
ONTARIO PROJECT

anything which may be done, happen or arise with respect to said gas after such delivery.

3. Each party shall indemnify and save harmless the other party on account of any and all damages, claims or actions arising out of the maintenance or operation of the property or equipment of the indemnifying party, the point of delivery of the gas, as hereinbefore specified, to be the point of division of responsibility between the parties.

4. In the event of any claim or demand against either the Buyer or the Seller with respect to which there is a dispute as to responsibility for the gas or facilities involved, either the Buyer or the Seller may demand in writing that the facts material to the question of responsibility be submitted to arbitration; thereupon, within ten days after such demand, the Buyer and the Seller shall each name a disinterested arbitrator and such arbitrators shall agree upon a disinterested third party as a third arbitrator. The dispute in question shall be submitted to the arbitrators so appointed and the written, signed, decision of a majority of said arbitrators in respect of the facts material to the question of responsibility shall be final and binding upon the Buyer and the Seller without prejudice to the right of either of them to deny or dispute liability upon any other ground. Such arbitration shall be a condition precedent to the bringing of any suit or action at law between the Buyer and Seller in which such question of responsibility is an issue.

Operations under this contract shall continue, without prejudice, during the pendency of any such arbitration, and the expense of such arbitration shall be borne one-half by the Buyer and one-half by the Seller.

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Article XIII

Pressure

1. Seller agrees to use due care and diligence to deliver gas to Buyer during the period April 15 to October 15 in every year throughout the life of this agreement, at such uniform pressure as Buyer may require up to, but not exceeding, an average pressure of two hundred fifty (250) pounds to the square inch, gauge, averaged over each day, except during such extraordinary periods (not to exceed twenty-one (21) days during any year) as Seller is engaged in maintenance operations requiring the shutting down of compressor units or requiring the depressuring of pipe lines for the purpose of cleaning, repairing or performing other maintenance operations on such lines; provided, however, that Seller may deliver, and Buyer will receive, gas at pressures up to but not exceeding three hundred fifty (350) pounds to the square inch, gauge, when Seller, in its sole judgment, has gas available at such higher pressures at the point of delivery.

2. Buyer agrees to install, operate, and maintain, at its own expense, such regulating devices as may be necessary to regulate the pressure of the gas after delivery to Buyer.

Article XIV

Warranty of Title to Gas

Seller warrants generally the title to all gas delivered hereunder and the right to sell the same and that such gas shall be free and clear from all liens and adverse claims.

Article XV

Force Majeure

1. Neither party shall be liable in damages under any clause of this contract to the other for any act, omission or circumstances occasioned by, or in consequence of, any acts of God, strikes, lockouts, acts of the public enemy, wars, blockades, insurrections, riots, epidemics, landslides, lightning, earthquakes, fires, storms, floods, washouts, arrests and restraints of rulers and peoples, civil disturbances, explosions, breakage or accident to machinery or lines of pipe, failure of gas supply, the order of any court or governmental authority which has been resisted in good faith by all reasonable legal means, and any other cause, whether of the kind herein enumerated, or otherwise, not within the control of the party claiming suspension and which by the exercise of due diligence such party is unable to prevent or overcome.

2. Such causes or contingencies affecting the performance of this agreement by either party, however, shall not relieve it of liability in the event of its concurring negligence or in the event of its failure to use due diligence to remedy the situation and remove the cause in an adequate manner and with all reasonable dispatch, nor shall such causes or contingencies affecting the performance of this agreement relieve either party from its obligations to make payments of amounts then due hereunder.

Article XVI

Term of Agreement

This agreement shall extend from the date of its execution to (a) the expiration of a period of twenty (20) years, commencing with the first day of the month imme-

diately following the date of initial delivery of gas by Seller to Buyer hereunder, or (b) December 31, 1965, whichever date is earlier, and, unless then terminated by written notice given by one of the parties hereto to the other party hereto at least six months prior to such expiration date, shall continue after such expiration date until terminated by either party hereto upon six (6) months' prior written notice to the other.

Article XVII

Definitions

Except where the context otherwise indicates another or different meaning or intent, the following terms are intended, and shall be construed, to have meanings as follows:

1. The term "day" shall mean a period of twenty-four (24) consecutive hours beginning and ending at 7:00 o'clock A.M. Eastern Standard Time.

2. The term "month" shall mean the period beginning at 7:00 o'clock A.M. Eastern Standard Time on the first day of a calendar month and ending at 7:00 o'clock A.M. Eastern Standard Time on the first day of the next succeeding calendar month.

3. The term "ton" shall mean the weight of two thousand (2000) pounds avoirdupois.

Article XVIII

Miscellaneous

1. No modification of the terms and provisions hereof shall be or become effective, except by the execution of supplementary written contracts.

2. No waiver by either party of any one or more defaults by the other in the performance of any provisions of this agreement shall operate or be construed as a waiver of any future default or defaults, whether of a like or of a different character.

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3. Any company which shall succeed by purchase, merger or consolidation to the properties, substantially as an entirety, of Seller or of Buyer shall be entitled to the rights and shall be subject to the obligations of its predecessor in title under this agreement; and either party may assign or pledge this agreement under the provisions of any mortgage, deed of trust, indenture or similar instrument which it has executed or may execute hereafter; otherwise, neither party shall assign this agreement or any of its rights hereunder unless it first shall have obtained the consent thereto of the other party.

4. Except as herein otherwise provided, any notice, request, demand, statement or bill provided for in this agreement or any notice which either party may desire to give to the other shall be in writing and shall be considered as duly delivered when mailed by registered mail to the post office address of the party intended to receive the same, as the case may be, as follows:

Seller: Panhandle Eastern Pipe Line Company
1221 Baltimore Avenue
Kansas City, Missouri, U. S. A.

Buyer: Union Gas Company of Canada, Ltd,
Chatham, Ontario, Canada

or at such other address as either party shall designate by formal written notice to the other. Routine communications, including monthly statements and payments, shall be considered as duly delivered when mailed by either registered or ordinary mail.

5. This contract is subject to valid laws, orders, rules and regulations of duly constituted authorities having jurisdiction.

6. This contract has been executed at the City of Chicago in the State of Illinois, one of the States of the United States of America, and it is understood and

agreed that this contract and each of the provisions thereof shall be construed in accordance with the laws of said State of Illinois.

In Witness Whereof, the parties hereto have caused this agreement to be signed by their respective officers thereunto duly authorized and their respective corporate seals to be hereto affixed and attested by their respective Secretaries or Assistant Secretaries, the day and year first above written.

Panhandle Eastern Pipe Line Company

By W. G. Maguire
Chairman of the Board

(Corporate Seal)
Attest:
Leith V. Watkins
Secretary

Union Gas Company of Canada, Ltd.

By David P. Rogers
President

(Corporate Seal)
Attest:
F. Palin
Secretary

EXHIBIT "A"

PANHANDLE EASTERN PIPE LINE CO.	
GENERAL MAP SHOWING LAYOUT OF ONTARIO PROJECT	
DATE 11-30-1944	SCALE 1" = 9 MI.
DRAWN BY A.C.R. - F.R.S.	APPROVED
CHECKED BY	BOOK NO.
APPROVED	DRWG. NO. 2112

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Hearing Exhibit No. 66

PRESIDENTIAL PERMIT

AUTHORIZING PANHANDLE EASTERN PIPE LINE COMPANY TO CONSTRUCT, OPERATE, MAINTAIN AND CONNECT FACILITIES FOR THE EXPORTATION OF NATURAL GAS TO CANADA

By virtue of the authority vested in me as President of the United States, and by reason of the acceptance of the conditions, provisions, and requirements hereinafter specified, permission is hereby granted to Panhandle Eastern Pipe Line Company, a Delaware corporation, having its principal business offices at Kansas City, Missouri and Chicago, Illinois (hereinafter referred to as the Permittee), to construct, operate, and maintain facilities more specifically described below, extending from the west bank of the Detroit River in the City of River Rouge, Michigan, underneath the river, to points of connection with pipelines of Union Gas Company of Canada, Ltd. (a corporation of the Province of Ontario, Canada), at the border of the United States and Canada, and to connect same at the border of the United States and Canada with the pipelines of Union Gas Company of Canada, Ltd., for the exportation of natural gas to Canada authorized by the Federal Power Commission (hereinafter called the Commission) under Section 3 of the Natural Gas Act simultaneously with the release of this permit.

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ARTICLE 1. It is expressly agreed by the Permittee that the facilities and operations herein described shall be subject to all the conditions, provisions, and requirements of this permit; Permittee agrees that this permit may be terminated at the will and pleasure of the President of the

[p. 726-blank]

United States with or without cause and that it may be amended by the President of the United States upon proper application therefor.

ARTICLE 2. The facilities covered by and subject to this permit are the following:

> Two parallel 12¾-inch pipelines extending from the west bank of the Detroit River in the City of River Rouge, Michigan, underneath the Detroit River to points of connection with transmission pipelines of Union Gas Company of Canada, Ltd., at the international boundary line between the United States and Canada;

as more fully set out in the application of Panhandle Eastern Pipe Line Company for Presidential Permit filed with the Commission on January 6, 1945, and an amendment thereto filed on October 9, 1945, in Docket No. G-611, and in the pertinent data and information submitted at the hearing before the Commission commencing on September 18, 1945 and concluding on October 19, 1945, upon the applications of Panhandle Eastern Pipe Line Company in Docket Nos. G-612 and G-619, respectively for an order, pursuant to Section 3 of the Natural Gas Act, authorizing the exportation of natural gas from the United States to Canada, and for a certificate of public convenience and necessity, pursuant to Section 7 of the Natural Gas Act, as amended, to authorize the construction and operation of certain facilities for the transportation and sale of natural gas, subject to the jurisdiction of the

Commission; and as specifically shown and described by Exhibit "C" to the application in Docket No. G-611, which said exhibit is hereby made a part of this permit. No substantial change shall hereafter be made in the facilities

and operations authorized by this permit until such change shall have been approved by the Commission.

ARTICLE 3. The construction, operation, maintenance and connection of the aforesaid facilities shall be subject to the inspection and approval of the District Engineer, Corps of Engineers, United States Army, in charge of the district affected herein and a representative of the Commission, both of whom shall be the authorized representatives of the United States for such purposes. The Permittee shall allow officers and employees of the United States showing proper credentials free and unrestricted access into, through, and across the land occupied by said facilities in the performance of their official duties.

ARTICLE 4. If in the future it should appear to the Secretary of War that any facilities or operations permitted hereunder cause unreasonable obstruction to the free navigation of any of the navigable waters of the United States, the Permittee may be required, upon notice from the Secretary of War, to remove or alter the same so as to render navigation through such waters free and unobstructed.

ARTICLE 5. The Permittee shall be liable for all damages occasioned to the property of others by the construction, operation or maintenance of the aforesaid facilities and connections, and in no event shall the United States be liable therefor. The Permittee shall do everything reasonably within its power to prevent or suppress fires

on or near the land occupied under this permit.

ARTICLE 6. Permittee agrees to file with the Commission, under oath and in such detail as the Commission may require, such statements or reports with respect to the natural gas exported or the facilities described herein, as the Commission may, from time to time, request. Such infor-

mation may be made available to any Federal, State, or local agency requesting such information.

ARTICLE 7. Neither this permit nor the facilities and connections, nor any part thereof, covered by this permit shall be transferable or assignable, but the permit shall continue in effect temporarily for a reasonable time thereafter in the event of the involuntary transfer of the facilities and connections used hereunder by operation of law (including such transfers to receivers, trustees, or purchasers under foreclosure or judicial sale) pending the making of an application for a permanent permit and decision thereon, provided notice is promptly given in writing to the Commission accompanied by a statement that the facilities and connections authorized by this permit remain substantially the same as before the transfer. The Permittee shall maintain the facilities and connections, and every part thereof, in a condition of repair for the efficient operation of said facilities and connections in the transportation of natural gas, and shall make all necessary renewals and replacements.

ARTICLE 8. The construction, operation, maintenance and connections hereby permitted of facilities for the exportation of natural gas, it is understood, shall be in all respects subject to

the power of Congress under its authority to permit or prohibit the maintenance and operation of such facilities and to regulate interstate and foreign commerce as applied to business of this Permittee, and to such order or orders as may be issued by the Commission pursuant to Section 3 of the Natural Gas Act.

ARTICLE 9. Upon the termination, revocation or surrender of this permit, the transportation facilities herein au-

thorized shall be removed within such time as the Secretary of War may specify, and at the expense of the Permittee. Upon failure of the Permittee to remove such transportation facilities or any portion thereof, the Secretary of War may take possession of the same and remove them at the expense of the Permittee, and no claim for damages against the United States or any agency thereof shall be created by such removal.

ARTICLE 10. The Permittee agrees that when, in the opinion of the President of the United States, evidenced by a written order addresed to it as holder of this permit, the safety of the United States demands it, the United States shall have the right to enter upon and take possession of any of the facilities, or parts thereof, maintained or operated under this permit, and all contracts covering the transportation or sale of natural gas over said facilities, to retain possession, management, and control thereof for such length of time as may appear to the President to be necessary to accomplish said purposes and then to restore possession and control to the Permittee; and in the event that the United States shall exercise such right it shall pay to the Permittee just and fair compensation for the use of

said facilities upon the basis of a reasonable profit in time of peace, and the cost of restoring said facilities to as good condition as existed at the time of taking over thereof, less the reasonable value of any improvements that may be made thereto by the United States and which are valuable and serviceable to the Permittee.

ARTICLE 11. This permit is subject to any action which the Government of the United States may in the future deem expedient or necessary to take in case any part of the aforesaid facilities comes into the control of any foreign government.

ARTICLE 12. The Government of the United States shall be entitled to the same or similar privileges as may by law, regulations, agreement, or otherwise, be granted by the Permittee to any foreign government.

IN WITNESS WHEREOF, I Harry S. Truman, have hereunto signed my name this 4th, day of April, 1946 in the City of Washington, District of Columbia.

/s/ HARRY S. TRUMAN
President of the United States

* * * * * * * * * *

MIDDLE EASTERN PIPE LINE COMPANY

Estimate of Annual Revenues and Volumes of Gas Related Thereto
Years 1956 and 1957

Line No.	Main Line Sales - East of Liberal	1956 Sum of Billing Demands MCF (1)	1956 Total Sales MCF (2)	1956 Total Revenue (3)	1957 Sum of Billing Demands MCF (4)	1957 Total Sales MCF (5)	1957 Total Revenue (6)
	Resale Sales (Jurisdictional)						
	GS Rate Schedules						
1.	G-1 (Excl. Mich. Gas Storage Co.)	3 206 600	78 730 500	$ 24 068 900	3 241 900	83 569 000	$ 25 168 000
2.	G-2	3 122 100	57 648 400	17 137 300	3 156 400	61 676 200	17 946 700
3.	G-3	76 200	1 201 100	367 400	77 000	1 213 300	371 200
	SGS Rate Schedules						
4.	SG-1		983 000	345 000		1 034 900	363 200
5.	SG-2		993 500	313 000		1 068 600	336 600
6.	SG-3		189 300	57 400		203 800	61 800
7.	Total GS and SGS (Excl. Michigan Gas Storage Company)		139 745 800	42 289 000		148 765 800	44 247 500
	LS Rate Schedule						
8.	East Ohio Gas Company, The	1 020 000	31 110 000	8 868 900	1 020 000	31 025 000	8 851 100
9.	Michigan Consolidated Gas Co.	1 050 000	32 025 000	9 129 800	1 050 000	31 937 500	9 111 400
10.	Ohio Fuel Gas Company, The	600 000	18 300 000	5 217 000	600 000	18 250 000	5 206 500
11.	Texas Gas Transmission Corp.	0	0		0	0	
12.	Total LS Rate Schedule		81 435 000	23 215 700		81 212 500	23 169 000
	Michigan Gas Storage Company						
13.	G-1 and S-1		54 775 000	15 720 400		54 715 000	15 703 200
14.	Additional Sales to E.O.G. Co., O.F.G. Co. and M.G.S. Co.		35 686 500	10 242 000		38 024 000	10 912 900
15.	Total Resale Sales (Jurisdictional)		311 642 300	91 467 100		322 717 300	94 032 600
	Export Sales						
16.	Union Gas Company of Canada, Ltd.		16 000 000	5 325 000		17 000 000	5 675 000
17.	Total Resale Sales		327 642 300	96 792 100		339 717 300	99 707 600
	Direct Sales						
18.	Residential		138 500	69 250		145 400	72 700
19.	Commercial		8 300	4 150		8 700	4 350
20.	Industrial		30 210 900	9 365 400		30 128 600	9 339 900
21.	Total Direct Sales		30 357 700	9 438 800		30 282 700	9 416 950
22.	Total Main Line Sales - East of Liberal		358 000 000	106 230 900		370 000 000	109 124 550
	Main Line Sales - West of Liberal						
23.	Sales to Other Gas Utilities - Texas		162 500	40 100		162 500	40 100
24.	Total Main Line Sales		358 162 500	106 271 000		370 162 500	109 164 650
	Field Sales						
25.	Residential (Texas & Okla.)		18 300	5 900		19 200	6 200
26.	Commercial (Texas & Okla.)		3 400	1 000		3 600	1 100
27.	Sales to Other Gas Utilities [1]		1 138 000	184 600		1 188 000	190 400
28.	Other Sales		155 000	31 000		156 000	31 200
29.	Total Field Sales		1 314 700	222 500		1 366 800	228 900
30.	Total System Sales		359 477 200	$ 106 493 500		371 529 300	$ 109 393 550

[1] Includes sales to Consumers Power Company, Quinque Oil & Gas Company, and Northern Natural Gas Company.

PANHANDLE EASTERN PIPE LINE COMPANY

Estimate of System Annual Revenues and Volumes of Gas Related Thereto
Years 1956 and 1957

Line No.	Main Line Sales - East of Liberal	1956 Sum of Billing Demands MCF (1)	1956 Total Sales MCF (2)	1956 Total Revenue (3)	1957 Sum of Billing Demands MCF (4)	1957 Total Sales MCF (5)	1957 Total Revenue (6)
	Resale Sales (Jurisdictional)						
	GS Rate Schedules						
1.	G-1 Michigan Gas Storage Co.	700 000	21 320 000	$ 6 207 200	700 000	21 235 000	$ 6 189 100
2.	G-1 Other	3 141 800	74 925 600	23 136 600	3 176 300	78 795 000	24 342 900
3.	G-2	3 033 600	59 956 100	17 613 400	3 066 900	63 092 900	18 267 800
4.	G-3	76 200	1 143 100	362 700	77 000	1 201 100	374 900
	SGS Rate Schedules						
5.	SG-1		941 400	336 100		983 000	350 900
6.	SG-2		1 328 100	414 400		1 451 700	452 900
7.	SG-3		174 800	53 800		139 300	58 300
8.	Total GS and SGS Rate Schedules		159 789 100	48 424 200		166 948 000	50 036 800
	LS Rate Schedule						
9.	East Ohio Gas Company, The	1 440 000	43 920 000	12 710 200	1 440 000	43 300 000	12 684 600
10.	Michigan Consolidated Gas Co.	1 524 000	46 482 000	13 451 600	1 524 000	46 355 000	13 424 500
11.	Ohio Fuel Gas Company, The	840 000	25 620 000	7 414 200	840 000	25 550 000	7 399 400
12.	Total LS Rate Schedule	3 804 000	116 022 000	33 576 000	3 804 000	115 705 000	33 508 500
	Storage Rate Schedule						
13.	East Ohio Gas Company, The		6 000 000	1 746 000		6 000 000	1 746 000
14.	Michigan Gas Storage Company		56 000 000	16 296 000		56 000 000	16 296 000
15.	Total Storage Rate Schedule		62 000 000	18 042 000		62 000 000	18 042 000
16.	Total Resale Sales (Jurisdictional)		337 811 100	100 042 200		344 653 000	101 587 300
	Export Sales (Non-Jurisdictional)						
17.	Union Gas Company of Canada, Ltd.		16 000 000	5 325 000		17 000 000	5 675 000
18.	Total Resale Sales		353 811 100	105 367 200		361 653 000	107 262 300
	Direct Sales (Non-Jurisdictional)						
19.	Residential		138 500	69 250		145 400	72 700
20.	Commercial		8 300	4 150		8 700	4 350
21.	Industrial		30 210 900	9 365 400		30 128 600	9 339 900
22.	Total Direct Sales (Non-Jurisdictional)		30 357 700	9 438 800		30 282 700	9 416 950
23.	Total Main Line Sales - East of Liberal		384 168 800	114 806 000		391 935 700	116 679 250
	Main Line Sales - West of Liberal						
24.	Sales to Other Gas Utilities - Texas		162 500	40 100		162 500	40 100
25.	Total Main Line Sales		384 331 300	114 846 100		392 098 200	116 719 350
	Field Sales (Non-Jurisdictional)						
26.	Residential (Texas & Okla.)		18 300	5 900		19 200	6 200
27.	Commercial (Texas & Okla.)		3 400	1 000		3 500	1 100
28.	Sales to Other Gas Utilities[1]		1 138 000	184 600		1 188 000	190 400
29.	Other Sales		155 000	31 000		136 000	31 200
30.	Total Field Sales (Non-Jurisdictional)		1 314 700	222 500		1 366 800	228 900
31.	Total System Gas Sales		385 646 000	$ 115 068 600		393 465 000	$ 116 948 250

Note: [1] Includes sales to Southeastern Michigan Gas Company, Quinque Oil & Gas Company, and Northern Natural Gas Company.

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Schedule No. 1
Page 1 of 1

PANHANDLE EASTERN PIPE LINE COMPANY

Estimate of System Annual Revenues and Volumes of Gas Related Thereto
Years 1956 and 1957

Line No.	Main Line Sales - East of Liberal	1956 Sum of Billing Demands MCF (1)	1956 Total Sales MCF (2)	1956 Total Revenue (3)	1957 Sum of Billing Demands MCF (4)	1957 Total Sales MCF (5)	1957 Total Revenue (6)
	Resale Sales (Jurisdictional)						
	GS Rate Schedules						
1.	G-1 Michigan Gas Storage Co.	700 000	21 320 000	$ 6 207 200	700 000	21 235 000	$ 6 189 100
2.	G-1 Other	3 141 800	74 925 600	23 436 600	3 176 300	78 795 000	24 342 900
3.	G-2	3 033 600	59 956 100	17 763 700	3 066 900	63 092 900	18 424 600
4.	G-3	76 200	1 143 100	362 700	77 000	1 201 100	374 900
	SGS Rate Schedules						
5.	SG-1		941 400	336 100		983 000	350 900
6.	SG-2		1 328 100	425 000		1 451 700	464 500
7.	SG-3		174 800	53 800		189 300	58 300
8.	Total GS and SGS Rate Schedules		159 789 100	48 585 100		166 948 000	50 205 200
	LS Rate Schedule						
9.	East Ohio Gas Company, The	1 440 000	43 920 000	12 710 200	1 440 000	43 800 000	12 684 600
10.	Michigan Consolidated Gas Co.	1 524 000	46 482 000	13 451 600	1 524 000	46 355 000	13 424 500
11.	Ohio Fuel Gas Company, The	840 000	25 620 000	7 414 200	840 000	25 550 000	7 399 400
12.	Total LS Rate Schedule	3 804 000	116 022 000	33 576 000	3 504 000	115 705 000	33 508 500
	Storage Rate Schedule						
13.	East Ohio Gas Company, The		6 000 000	1 746 000		6 000 000	1 746 000
14.	Michigan Gas Storage Company		56 000 000	16 296 000		56 000 000	16 296 000
15.	Total Storage Rate Schedule		62 000 000	18 042 000		62 000 000	18 042 000
16.	Total Resale Sales (Jurisdictional)		337 811 100	100 203 100		344 653 000	101 755 700
	Export Sales (Non-Jurisdictional)						
17.	Union Gas Company of Canada, Ltd.		16 000 000	5 325 000		17 000 000	5 675 000
18.	Total Resale Sales		353 811 100	105 528 100		361 653 000	107 430 700
	Direct Sales (Non-Jurisdictional)						
19.	Residential		138 500	69 250		145 400	72 700
20.	Commercial		8 300	4 150		8 700	4 350
21.	Industrial		30 210 900	9 365 400		30 128 600	9 339 900
22.	Total Direct Sales (Non-Jurisdictional)		30 357 700	9 438 800		30 282 700	9 416 950
23.	Total Main Line Sales - East of Liberal		384 168 800	114 966 900		391 935 700	116 847 650
	Main Line Sales - West of Liberal						
24.	Sales to Other Gas Utilities - Texas		162 500	40 100		162 500	40 100
25.	Total Main Line Sales		384 331 300	115 007 000		392 098 200	116 887 750
	Field Sales (Non-Jurisdictional)						
26.	Residential (Texas & Okla.)		18 300	5 900		19 200	6 200
27.	Commercial (Texas & Okla.)		3 400	1 000		3 600	1 100
28.	Sales to Other Gas Utilities 1/		1 138 000	184 600		1 188 000	190 400
29.	Other Sales		155 000	31 000		156 000	31 200
30.	Total Field Sales (Non-Jurisdictional)		1 314 700	222 500		1 366 800	228 900
31.	Total System Gas Sales		385 646 000	$ 115 229 500		393 465 000	$ 117 116 650

Note: 1/ Includes sales to Southeastern Michigan Gas Company, Quinque Oil & Gas Company, and Northern Natural Gas Company.

10282

Hearing Exhibit No. 81

EXHIBIT NO. .....

F. P. C. DOCKET NO. G-1705, ET AL.

AGREEMENTS BETWEEN

PANHANDLE EASTERN PIPE LINE COMPANY

AND

CUSTOMERS

Small General Service Rate SG-1

Indiana

Lapel, Town of
Montezuma, Town of
Pendletown Natural Gas Company
Pittsboro, Town of
Roachdale, Town of

Ohio

Central States Natural Gas Co., Inc.

Small General Service Rate SG-2

Missouri

Missouri Central Natural Gas Company

Illinois

Auburn, City of
Morton Municipal Gas Company
Pittsfield, City of
Town Gas Company (Farm Taps)
Town Gas Company (Virden, Girard, and Thayer)

General Service Rate G-1

Indiana

Central Indiana Gas Company
Greenfield Gas Company, Inc.
Indiana Gas Distribution Corp.
Indiana Gas & Water Company, Inc.

(10282)

Indianapolis, City of
Kokomo Gas & Fuel Company
Northern Indiana Fuel & Light Company
Northern Indiana Public Service Co.
Ohio Valley Gas Corporation
Richmond Gas Corporation
Ohio
Ohio Gas Company
Toledo Edison Company, The
Michigan
Battle Creek Gas Company
Citizens Gas Fuel Company
Michigan Gas Utilities Company
Southeastern Michigan Gas Company

10283

General Service Rate G-2
Missouri
Citizens Gas Company of Hannibal
Fulton, City of
Missouri Edison Company
Missouri Power & Light Company
Missouri Utilities Company
Missouri Western Gas Company
Illinois
Central Illinois Electric and Gas Company
Central Illinois Light Company
Central Illinois Public Service Company
Citizens Gas Company
Illinois Power Company

L-S Customers
East Ohio Gas Company, The
Ohio Fuel Gas Company, The
Michigan Gas Storage Company

10369

January 22, 1954

Panhandle Eastern Pipe Line Company
120 Broadway
New York 5, New York

Dear Sirs:

The purpose of this letter is to state the agreement between us with respect to an increase in the quantities of gas sold by Panhandle Eastern Pipe Line Company (Panhandle) to the undersigned.

Panhandle is selling natural gas to us and we are purchasing natural gas from Panhandle under a certain service agreement dated June 1, 1952, which is on file with the Federal Power Commission and which provides a contract demand of 4,300 Mcf per day for the five winter months, November, December, January, February, and March, and varying contract demands for the remaining months of the year.

We understand that Panhandle has, for sometime past, been engaged in exploratory work looking toward the development of a large underground natural gas storage reservoir near Waverly, Illinois, adjacent to Panhandle's main line. We understand further that Panhandle's plan for Waverly Storage Field calls for development of the field, in the initial phase, to afford an adequate volume of working storage with respect to deliverability and seasonal volume; that the first phase of development will be completed by November 1, 1955; that, subject to certain conditions hereinafter mentioned, volumes of gas can be made available from such underground storage to Panhandle's General Service and Small General Service customers on or about November 1, 1955; and that, during the winter of 1954-55, when the Sotrage Field will still be in development, smaller volumes of gas may be made available to General Service and Small General Service customers.

The conditions mentioned in the immediately-preceding paragraph are as follows:

1. That certain problems relating to the physical operation of the storage project, which are now being studied by Panhandle, are solved to the satisfaction of Panhandle.

2. That Panhandle's General Service and Small General Service customers will enter into contracts with Panhandle for additional volumes of gas in volumes which, in the aggregate, will make the storage program feasible.

3. That Panhandle will be allowed to collect rates for the gas thus provided which, in Panhandle's judgment, will justify the very substantial investment which Panhandle will be required to make in the development and operation of the Storage Field.

4. That all necessary certificates of convenience and necessity and other governmental authorizations be obtained by Panhandle in form and substance satisfactory to Panhandle.

With the above understanding, it is our intention to enter into a new service agreement with Panhandle superseding the service agreement presently in effect which will provide for increased contract demands, which Panhandle will be able to supply by reason of its storage program mentioned above and which will become effective November 1, 1955, or as soon thereafter as the necessary facilities can be constructed and placed in operation, and will extend for the balance of the term of the present service agreement between us.

To that end, we set forth below our estimate of contract demands which we will require and for which we will be willing to contract for the period beginning November 1, 1955, and extending for the duration of the

service agreement between us. Such contract demands are as follows:

November	)	6,300
December	)	6,300
January	)	6,300
February	)	6,300
March	)	6,300
April		5,500
May		4,500
June		3,700
July		3,200
August		3,300
September		4,100
October		5,100

In the event that Panhandle notifies us by August 1, 1954, that tests have shown that the Waverly Storage Field can be developed successfully, we will execute a new service agreement or agreements to be tendered us by Panhandle on or before that date, which will provide (a) that the contract demands in our present service agreement will be increased as set forth above commencing as of November 1, 1955, and (b) that the contract demands for the period commencing November 1, 1954, through October 31, 1955, will be increased in an amount to be agreed upon between us, but not in excess of 50% of the increase in contract demands provided for as of November 1, 1955.

Yours very truly,

CITIZENS GAS FUEL COMPANY

By /s/ E. V. GMEINER

Pres. & Gen'l Mgr.

The above correctly states our understanding and agreement.

PANHANDLE EASTERN PIPE LINE COMPANY

By /s/ FRED H. ROBINSON

10412

February 2, 1954

Panhandle Eastern Pipe Line Company
120 Broadway
New York 5, New York

Dear Sirs:

The purpose of this letter is to state the agreement between us with respect to an increase in the quantities of gas sold by Panhandle Eastern Pipe Line Company (Panhandle) to the undersigned.

Panhandle is selling natural gas to us and we are purchasing natural gas from Panhandle under a certain service agreement dated February 4, 1952, which is on file with the Federal Power Commission and which provides a contract demand of 67,000 Mcf per day for the five winter months, November, December, January, February, and March, and varying contract demands for the remaining months of the year.

We understand that Panhandle has, for sometime past, been engaged in exploratory work looking toward the development of a large underground natural gas storage reservoir near Waverly, Illinois, adjacent to Panhandle's main line. We understand further that Panhandle's plan for Waverly Storage Field calls for development of the field, in the initial phase, to afford an adequate volume of working storage with respect to deliverability and seasonal volume; that the first phase of development will be completed by November 1, 1955; that, subject to certain condi-

tions hereinafter mentioned, volumes of gas can be made available from such underground storage to Panhandle's General Service and Small General Service customers on or about November 1, 1955; and that, during the winter of 1954-55, when the Storage Field will still be in development, smaller volumes of gas may be made available to General Service and Small General Service customers.

10413

The conditions mentioned in the immediately-preceding paragraph are as follows:

1. That certain problems relating to the physical operation of the storage project, which are now being studied by Panhandle, are solved to the satisfaction of Panhandle.

2. That Panhandle's General Service and Small General Service customers will enter into contracts with Panhandle for additional volumes of gas in volumes which, in the aggregate, will make the storage program feasible.

3. That Panhandle will be authorized by Federal Power Commission to collect rates for the gas thus provided which, in Panhandle's judgment, will justify the very substantial investment which Panhandle will be required to make in the development and operation of the Storage Field.

4. That all necessary certificates of convenience and necessity and other governmental authorizations be obtained by Panhandle in form and substance satisfactory to Panhandle.

With the above understanding, it is our intention to enter into a new service agreement with Panhandle superseding the service agreement presently in effect which will provide for increased contract demands, which Panhandle will be able to supply by reason of its storage program mentioned above and which will become effective November 1, 1955,

or as soon thereafter as the necessary facilities can be constructed and placed in operation, and will extend for the balance of the term of the present service agreement between us.

To that end, we set forth below our estimate of contract demands which we will require and for which we will be willing to contract for the period beginning November 1, 1955, and extending for the duration of the

service agreement between us. Such contract demands are as follows:

November)	
December)	
January)	97,000 Mcf
February)	
March)	
April	50,000 Mcf
May	40,000 Mcf
June	30,000 Mcf
July	22,000 Mcf
August	22,000 Mcf
September	41,000 Mcf
October	62,000 Mcf

In the event that Panhandle notifies us by August 1, 1954, that tests have shown that the Waverly Storage Field can be developed successfully we will execute a new service agreement or agreements in a form approved by Federal Power Commission, to be tendered us by Panhandle on or before that date, which will provide (a) that the contract demands in our present service agreement will be increased as set forth above commencing as of November 1, 1955, and (b) that the contract demands for the period commencing November 1, 1954, through October 31, 1955, will be increased in an amount to be agreed upon between us, but

not in excess of 50% of the increase in contract demands provided for as of November 1, 1955.

Yours very truly,

ILLINOIS POWER COMPANY

By /s/ E. S. HIGHT

Vice President

The above correctly states our understanding and agreement.

PANHANDLE EASTERN PIPE LINE COMPANY

By /s/ FRED H. ROBINSON

10415

November 6, 1953

Panhandle Eastern Pipe Line Company
120 Broadway
New York 5, New York

Re: Panhandle Eastern Pipe Line Company—The East Ohio Gas Company proposed New Gas Service

Dear Sirs:

The purpose of this letter is to state the understanding reached between our two Companies with respect to an increase in the quantities of gas to be sold by Panhandle Eastern Pipe Line Company (Panhandle) to The East Ohio Gas Company (East Ohio).

Panhandle is selling and delivering natural gas to East Ohio and East Ohio is purchasing natural gas from Panhandle under Rate Schedule LS-1 of Panhandle's Tariff and that certain Service Agreement dated July 5, 1951, which is on file with the Federal Power Commission and which provides a contract demand of 85,000 Mcf per day, the term of such agreement being fifteen (15) years from

and after October 1, 1951, and thereafter for successive twelve (12) month periods unless and until cancelled by either party on eighteen (18) months' written notice to the other.

It is the intention of our two Companies to enter into a new service agreement, superseding the service agreement presently in effect, which will provide a contract demand of 185,000 Mcf per day and which will become effective December 31, 1954, or as soon thereafter as the necessary facilities can be constructed and placed in operation and will extend for the balance of the term of the service agreement presently in effect. Such new agreement will provide for the sale and delivery of gas under and pursuant to Rate Schedule LS-1 of Panhandle's Tariff, with deliveries being made at the existing point of connection between the systems of Panhandle and East Ohio at pressures of not less than 400 lbs. psig.

10416

East Ohio understands that, in order to supply the additional 100,000 Mcf per day of gas to East Ohio contemplated herein, Panhandle must make a very substantial investment in the expansion of its present transportation facilities. East Ohio also understands that, while Panhandle is desirous of going forward with such an expansion program at any early date, Panhandle cannot commit itself to the investment of such large sums of capital until it has assurance that it will receive, for the gas which it sells and the service which it renders, rates adequate to justify such investment. East Ohio is aware that there is now pending before the Federal Power Commission proceedings (at Docket Nos. G-1116, etc.) in which is involved the question of whether Panhandle's rates, made effective under bond February 20, 1952, are just and reasonable; the hearing in such proceedings has been concluded; the briefs of all parties have been submitted; and the matter is

set for oral argument before the full Commission on November 19, 1953.

It is understood that, within thirty (30) days after the Federal Power Commission shall have rendered its decision with respect to Panhandle's rates and charges in the proceedings mentioned above, which decision shall have become final, pursuant to the provisions of the Natural Gas Act, after petition or grant of rehearing, if any, (but prior to court review), then Panhandle will advise East Ohio in writing whether it can, in the light of the Commission's decision, go forward with the expansion program contemplated herein or must exercise its right, reserved hereby, to cancel and terminate this agreement.

It is further understood that, in the event Panhandle is unable to give such notice on or before June 1, 1954, either Panhandle or East Ohio may, by written notice given within ten (10) days after such date, cancel and terminate this letter agreement.

10417

In the event that this letter agreement is not cancelled or terminated as above provided, it is agreed that our two Companies will file, or cause to be filed, with the Federal Power Commission or other governmental agency having jurisdiction such applications for certificates of public convenience and necessity as are requisite for such increased service and for the construction and operation of additional facilities. It is further understood and agreed that, if either of our two Companies for any reason is dissatisfied with the terms and conditions of any such certificates of public convenience and necessity, it may, upon due notice to the other, cancel and terminate this letter agreement, provided such notice is given within thirty (30) days after the date of issuance of such certificate of public convenience and necessity.

In the event of the cancellation and termination of this letter agreement, neither Company shall be obligated to perform its undertakings herein or liable to the other for failure so to perform.

If this letter correctly states our agreement, will you please have the enclosed duplicate thereof executed and returned to us.

Yours very truly,

THE EAST OHIO GAS COMPANY

By J. FRENCH ROBINSON
Chairman of the Board

The above correctly states our agreement.

PANHANDLE EASTERN PIPE LINE COMPANY

By W. G. MAGUIRE
Chairman of the Board

10418

February 8, 1954

Panhandle Eastern Pipe Line Company
120 Boardway
New York 5, New York

Dear Sirs:

Re: Painhandle Eastern Pipe Line Company—Ohio Fuel Gas Company proposed New Gas Service

The purpose of this letter agreement is to state the understanding reached between our two Companies with respect to an increase in the quantities of gas to be sold by Panhandle Eastern Pipe Line Company (Panhandle) to The Ohio Fuel Gas Company (Ohio Fuel).

Panhandle is selling and delivering natural gas to Ohio

Fuel and Ohio Fuel is purchasing natural gas from Panhandle under Rate Schedule LS-1 of Panhandle's Tariff and that certain Service Agreement dated July 5, 1951, which is on file with the Federal Power Commission and which provides a total Contract Demand of 50,000 Mcf per day, the term of such agreement being fifteen (15) years from and after October 1, 1951, and thereafter for successive twelve (12) month periods unless and until cancelled by either party on eighteen (18) months' written notice to the other.

It is the intention of our two Companies to enter into a new service agreement, superseding the service agreement presently in effect, which will provide a Contract Demand of 100,000 Mcf per day and which will become effective December 31, 1954, or as soon thereafter as the necessary facilities can be constructed and placed in operation and will extend for the balance of the term of the service agreement presently in effect.

Such new agreement will provide for the sale and delivery of gas under and pursuant to Rate Schedule LS-1 of Panhandle's Tariff, with deliveries being made as follows:

Point of Delivery	Maximum Daily Delivery Obligation (MCF)	Delivery Pressure (P. S. I. G.)
Existing delivery point known as "Maumee Connection"	75,000	250
Existing delivery point known as "Hollansburg Connection"	25,000	200

10419

Ohio Fuel understands that, in order to supply the additional 50,000 Mcf per day of gas to Ohio Fuel contemplated herein, Panhandle must make a very substantial investment in the expansion of its present transportation facilities.

Ohio Fuel also understands that, while Panhandle is desirous of going forward with such an expansion program at an early date, Panhandle cannot commit itself to the investment of such large sums of capital until it has assurance that it will receive, for the gas which it sells and the service which it renders, rates adequate to justify such investment. Ohio Fuel is aware that there is now pending before the Federal Power Commission proceedings (at Docket Nos. G-1116, etc.) in which in involved the question of whether Panhandle's rates, made effective under bond February 20, 1952, are just and reasonable; the hearing in such proceedings has been concluded; the briefs of all parties have been submitted; and oral argument before the full Commission was heard on November 19, 1953.

It is understood that, within thirty (30) days after the Federal Power Commission shall have rendered its decision with respect to Panhandle's rates and charges in the proceedings mentioned above, which decision shall have become final, pursuant to the provisions of the Natural Gas Act, after petition or grant of rehearing, if any, (but prior to court review), then Panhandle will advise Ohio Fuel in writing whether it can, in the light of the Commission's decision, go forward with the expansion program contemplated herein or must exercise its right, reserved hereby, to cancel and terminate this agreement.

It is further understood that, in the event Panhandle is unable to give such notice on or before June 1, 1954, either Panhandle or Ohio Fuel may, by written notice given within ten (10) days after such date, cancel and terminate this letter agreement.

In the event that this letter agreement is not cancelled or terminated as above provided, it is agreed that our two Companies will file, or cause to be filed, with the Federal Power Commission or other governmental agency having jurisdiction such applications for certificates of public convenience and necessity as are requisite for such in-

creased service and for the construction and operation of additional facilities. It is further understood and agreed that, if either of our two Companies for any reason is dissatisfied with the terms and conditions of any such certificates of public convenience and necessity, it may, upon due notice to the other, cancel and terminate this letter agreement, provided such notice is given within thirty (30) days after the date of issuance of such certificate of public convenience and necessity.

In the event of the cancellation and termination of this letter agreement, neither Company shall be obligated to perform its undertakings herein or liable to the other for failure so to perform.

10420

If this letter correctly states our agreement, will you please have the enclosed duplicate thereof executed and returned to us.

Very truly yours,

THE OHIO FUEL GAS COMPANY

By /s/ A. W. LUNDSTRUM

President

The above correctly states our agreement.

PANHANDLE EASTERN PIPE LINE COMPANY

By /s/ W. G. MAGUIRE

Chairman of the Board

10421

June 23, 1954

Panhandle Eastern Pipe Line Company
120 Broadway
New York 5, New York

Re: Panhandle Eastern Pipe Line Company — Michigan Gas Storage Company Proposed New Gas Service

Dear Sirs:

The purpose of this letter agreement is to state the understanding reached between our two Companies with respect to an increase in the quantities of gas to be sold by Panhandle Eastern Pipe Line Company (Panhandle) to Michigan Gas Storage Company (Storage Company).

Panhandle is selling and delivering natural gas to Storage Company and Storage Company is purchasing natural gas from Panhandle under two service agreements, one providing for service under Panhandle's Rate Schedule S-1 and the other under Panhandle's Rate Schedule G-1 of Panhandle's Tariff which is on file with the Federal Power Commission, together with said service agreements. The service agreement relating to service under the G-1 Schedule is dated July 20, 1951 and provides for a contract demand of 60,000 Mcf during the months of January, February, March, November and December; a contract demand of 50,000 Mcf during the months of April and October, and no deliveries during the months of May, June, July, August and September. Said service agreement is for a term of twenty (20) years beginning October 1, 1951 and thereafter for successive twelve (12) months periods unless and until cancelled by either party on eighteen (18) months' written notice to the other.

It is the intention of our two Companies to make no change in the service agreement under the S-1 Schedule but to enter into a new service agreement under the G-1

Schdule superseding the service agreement presently in effect. Such new service agreement will provide for a contract demand of 120,000 Mcf during the months of January, February, March, November and December; a contract demand of 110,000 Mcf during the months of April and October, and a contract demand of 60,000 Mcf during the months of May, June, July, August and September. Said new service agreement will become effective April 1, 1955, or as soon thereafter as the necessary facilities can be constructed and placed in operation, and will extend for the balance of the term of the service agreement presently in effect.

Said new service agreement shall be in all respects identical in form and substance with said present service agreement, except for dates, term, volumes of gas and cancellation of previous contracts which shall be in accordance with the provisions hereof. The execution of said new service agreement by Storage Company shall be subject to Storage Company obtaining the consent of the National Bank of Detroit, trustee under Storage Company's indenture.

10422

Storage Company understands that, in order to supply the additional 60,000 Mcf per day of gas to Storage Company contemplated herein, Panhandle must make a very substantial investment in the expansion of its present transportation facilities. Panhandle has filed an application with the Federal Power Commission in Docket No. G-2433 for a certificate of public convenience and necessity for such expansion of its present transportation facilities.

It is further understood and agreed that, if Panhandle for any reason is dissatisfied with the terms and conditions of any such certificate of public convenience and necessity issued to it in said proceedings in Docket No. G-2433 and determines not to accept any such certificate and not to

construct the facilities authorized thereby, it may, upon due notice to Storage Company, cancel and terminate this letter agreement, provided such notice is given within thirty (30) days after the date of issuance of such certificate of public convenience and necessity. If such notice is not given within such period, Panhandle and Storage Company forthwith shall execute the new service agreement provided for herein to become effective as hereinabove stated. Upon the execution of said new service agreement, Panhandle will file same with the Federal Power Commission.

It is understood that the purchase and sale of additional quantities of gas contemplated herein will require the construction and operation of facilities in Michigan by both Panhandle and Storage Company in addition to the facilities which are the subject of Panhandle's application to the Federal Power Commission in Docket No. G-2433.

Subject to obtaining the requisite authorization of regulatory bodies having jurisdiction, Panhandle agrees to construct and operate additional facilities as follows:

(1) A 12¾-inch pipeline looping the portion of Panhandle's present West Line, which extends from Freedom Station to Jackson, to be constructed in 1955.

(2) A pipe line between Panhandle's North Line and Flint No. 1 Station, a distance of approximately 1,200 feet, so as to provide a lateral between said points having a capacity equivalent to one 12-inch line, to be constructed in 1954.

(3) Replacement of existing valves on Panhandle's North Line between Salem Junction to and including Flint No. 1 station with valves having an 800 lb. working pressure, in 1954.

Subject to obtaining the requisite authorization of regulatory bodies having jurisdiction, Storage Company agrees to construct and operate additional facilities at Freedom Compressor Station and to construct a new pipe line between Mt. Pleasant and Zilwaukee Junction which will enable it, from time to time, to take from Panhandle and to deliver to Consumers Power Company the additional volumes of gas contemplated herein.

Panhandle and Storage Company further agree that upon completion of such loop line from Freedom Station to Jackson, any further line capacity

necessary to meet additional requirements for gas from the West line shall be the responsibility of each party in the ratio that its customers' additional requirements, above 38,700 Mcf for Panhnadle's customers (other than Storage Company) and above 69,000 Mcf for Storage Company's customer, make necessary such additional line capacity.

Panhandle and Storage Company each agrees to apply for such authority from regulatory bodies as may be required to construct and operate the additional facilities contemplated herein.

Storage Company agrees forthwith to apply to the Federal Power Commission for the withdrawal or dismissal of its application in Docket No. G-1989.

In the event of the cancellation and termination of this letter agreement in accordance with the foregoing provisions, neither company shall be obligated to perform its undertakings herein or be liable to the other for failure so to perform.

If this letter correctly states our agreement, will you

please have the enclosed duplicate thereof executed and returned to us.

Very truly yours,

MICHIGAN GAS STORAGE COMPANY

By /s/ D. E. KARN

President

The above correctly states our agreement.

PANHANDLE EASTERN PIPE LINE COMPANY

By /s/ FRED H. ROBINSON

Vice President

10612

Hearing Exhibit No. 107

Exhibit No. .....
Docket No. 2433
Central West Utility Co.

UNITED STATES OF AMERICA
FEDERAL POWER COMMISSION

IN THE MATTERS OF

Docket Nos. G-1705, G-1937, G-2433, and G-2475
PANHANDLE EASTERN PIPE LINE COMPANY

Docket No. G 1813
INDIANA GAS & WATER COMPANY, INC

Docket No. G-2023
INDIANA GAS & WATER COMPANY, INC

v.

PANHANDLE EASTERN PIPE LINE COMPANY

Docket No. G-2057
MISSOURI PUBLIC SERVICE COMPANY

Docket No. G-2932
CITY OF MONTGOMERY, MISSOURI

Docket No. G-3159
TOWN GAS COMPANY OF ILLINOIS

EXCERPTS FROM THE OFFICIAL STENOGRAPHER'S REPORT OF PROCEEDINGS BEFORE THE FEDERAL POWER COMMISSION IN THE MATTERS OF PANHANDLE EASTERN PIPE LINE COMPANY, DOCKETS NO. G-1116, et al., WITH RESPECT TO THE LIBERTY LATERAL.

Volume No. 81

HEARING—AUGUST 8, 1951

Transcript page 9233

M. K. Hager

resumed the stand as a witness, and having been previously duly sworn, was examined and testified further as follows:

Direct examination

By Mr. Yost:

Q. You are the same M. K. Hager who was testifying yesterday on the stand in these proceedings? A. Yes, sir.

10613

Q. Will you direct your attention to that part of the Panhandle system which is referred to generally as the Louisburg lateral, sometimes the state line lateral and sometimes the Liberty Lateral? I believe that is shown on exhibit 1. As shown on that exhibit, that line takes off from the Panhandle main line at the suction side of the Louisburg compressor station? A. That is correct.

(10613)

Q. And follows a meandering course up along the state line between Kansas and Missouri and then crosses over into Missouri and then goes on up to a point beyond the town of Liberty? A. That is right.

* * * * * * * * * *

Tr. p. 9234

By Mr. Yost: cont'd.

Q. What is the overall distance from that line from the Louisburg station to its terminus beyond Liberty? A. 66.6 miles.

Q. Will you describe in detail the physical characteristics of that line, starting from its beginning at the Louisburg compression station, and I think that it would be helpful to those in the room if you would indicate as you go along on this map which we have hanging from the mantelpiece. A. The first part of this lateral system is known by us as the state line ten-inch, commonly designated, and as Mr. Yost said, it begins at the suction side of Louisburg compressor station, and extends generally parallel to the main line.

10614

system, eastward from that point, for one mile, that one mile being eight-inch pipe.

Then the lateral line turns northward and extends 4.7 miles, it being ten-inch pipe, to a point of connection with a six-inch lateral serving the town of Louisburg; the Louisburg Gas Company serves the town of Louisburg.

Then northward from that point the state line ten-inch extends a distance of 24.3 miles, it still being ten-inch pipe, to a point south of Kansas City; it is approximately one mile south of the corporate limits of Kansas City, and then the ten-inch line turns eastward and extends approximately

12.5 miles to a point at which an eight-inch line is connected to that ten-inch line,

Tr. p. 9235

and extends generally northward in the direction of Liberty.

* * * * * * * * * *

Tr. p. 9236

* * * * * * * * * *

As to the physical characteristics of this system generally, the history, the physical history of the ten-inch pipe is rather sketchy, it having been constructed back in the year 1928, I believe, and at one time was the property of the Missouri-Kansas Pipe Line Company. The ten-inch pipe is generally 3/16s wall, ten inches outside diameter. It was laid bare,

Tr. p. 9237

that is, the pipe was not coated at the time it was constructed, and that ten-inch pipe, the total length of that probably is in the order of 43 miles.

10615

The ten-inch pipe, I might call it random construction, in that there are welded lengths in it and there are coupled connections in it.

* * * * * * * * * *

Tr. p. 9238

* * * * * * * * * *

By Mr. Yost:

Q. Was that part of the original construction in 1928 by Missouri-Kansas Pipe Line Company? A. I would like to say that back in that time, as I have been told, and I wasn't there, there was some local production all through

this area; that is, shallow wells, and that was the inception of Missouri-Kansas P' e Line Company; that is, the production and transmission and sale of that locally produced gas.

That local production has been all exhausted in the State of Missouri. There still remains a little of the old shallow

Tr. p. 9239

production down in Kansas and the vicinity of Osawatomie and Paola. We have been faced with a constant problem of supplying gas generally in this whole area; that is, in the area s uth and east of Kansas City as well as to Liberty and Excelsior Springs. I might say at Liberty Central West takes gas not only for consumption in the town of Liberty but they have pipe lines which go up to Smithville and down into the area north of Kansas City proper.

Our maintenance work on the primary supply line, which is the state line ten-inch, has been rather extensive. The fact

that the pipe is bare and was constructed originally through areas which are rather corrosive in nature, has resulted in a continuous maintenance problem and we are all the time fixing leaks on it.

We have successively, and by stages, improved the physical condition of that state line ten-inch in the past years and last year we thought we had the pipe--that is, the state line ten-inch—in shape to where we could impose 350 pounds on it down here at Louisburg compressor station at the input point. We tried that one day.

I was trying to think of the exact date.

Mr. Seacat: December 7.

The Witness: Thank you, Mr. Seacat, 7 December; the ten-inch blew up at a point roughly sixty per cent of the distance on the first—that is, sixty per cent of the distance

toward Louisburg on the first north leg of the lateral and at the time it

Tr. p. 9240

ruptured, we don't have gauges at that point which measure the exact pressure, but we had 346 pounds at the inlet of the pipe at Louisburg, and we estimate that the pressure at point of rupture was in the order of 280 to 300 pounds per square inch gauge, and so we fixed that break and since then we have considered that our maximum operating pressures would be restricted ot 325 pounds and that is the maximum order as far as the operation of that state line ten-inch is concerned.

10617

Our operating people were instructed not to put any more than that on it because we feel sure it will blow up again.

It is not possible to test that system in accordance with established practices. We just do the best we can with it, because the system traverses rather populated areas.

That, I believe, completes the description of the physical property itself.

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Tr. p. 9247

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M. K. Hager

In 1947, an exchange agreement was made with the Cities Service Gas Company whereby this exchange station could be utilized during certain troublesome periods with respect to gas supply. In return for gas delivered by Cities Service to Panhandle at that exchange station (south of Kansas City), Panhandle redelivers to Cities Service Gas Company equal amounts at a point on its—that is, Panhandle's main transmission system in Johnson County,

Missouri, gas—it is not shown on this map—and gas is used by Cities Service there, that is, it is taken by Cities Service there and transported through its lateral pipeline system which extends northward from that point to the communities of Carrollton, Lexington and Marshall, I believe.

Tr. p. 9248

There may be some others.

10618

I mention that because it has a bearing on the supply situation which I believe I should go into now, is that correct?

Tr. p. 9250

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By Mr. Yost:

Q. Now, will you take up the deliveries that were made from this line on a peak day last winter and tell us what day that was, what the date was? A. The peak day, as far as we can determine it within this local service area, occurred on February first, 1951, and I don't remember again what the mean temperature was, but it was at zero or below, and on that day, the pipe line working at very near its maximum, that is, the state line ten-inch working at very near its maximum, maximum allowable operating pressure, the average pressure recorded there on the gauge was 324 pounds. 14,291 Mcf of gas was measured through the check meters, which are in service on this state line ten-inch. That is a master meter, you might say.

On that day, 1,100 Mcf were delivered from the state line, 10-inch, to the low-pressure system at the point I mentioned,

Tr. p. 9251

which is located west of Belton. Also on that day, Cities Service Gas Company delivered through the exchange sta-

tion into the low-pressure system, 6,644 Mcf, so the total supply to the

10619

system on that day was the summation of 14,281, and 6,644, or 20,925 Mcf.

Of course, it isn't possible to say exactly what the deliveries through the many measuring stations are, and there are about 32 through which gas is delivered to Gas Service Company, in addition to those for the other towns, such as Louisburg, Liberty, Excelsior Springs.

Many of these measuring stations are equipped with displacement meters, and in some instances it was necessary to estimate the sendout through those measuring stations, but the output from the system, as we have been able to estimate it on that day, and from the known factors, was as follows:

511 Mcf was delivered to Louisburg Gas Company. 7,741 Mcf was delivered to Central West Utility. 2,043 was delivered to Missouri Power and Light for Excelsior Springs. The aggregate delivered to Gas Service Company for all of the farm taps and all of the larger measuring stations served in this system aggregated 10,220, as close as we can measure it, Mcf. A relatively small delivery of 12 Mcf was made to the Prairie Pipe Line Company, which is served from the state line 10-inch, and the Westinghouse plant, which is located just south of Kansas City near the point where the State line 10-inch turns

Tr. p. 52952

east, and the United Brick and Tile Company, which is served off of the low pressure system, but which doesn't operate generally

10620

during the winter months, took an aggregate of 186 Mfc. I don't have a breakdown of that figure.

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So we have a summation of those figures which results in 20,713 Mcf was the output from the system as closely as we can estimate it. That woud leave only 212 Mcf as a lost and unaccounted for figure, and I don't know whether that is high or law. We have done our best to estimate the sales and the rest, as is the usual practice, we call unaccounted for.

The pressures which endured on that day are typical of the lateral system under peak load conditions, and there was an average of 246 pounds on the state line 10-inch, at the point where Cities Service delivered gas to the low-pressure system through the exchange station.

The pressure upstream of the measuring station at Liberty, where deliveries are made to Central West Utility, averaged 92 pounds per square inch that day.

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Tr. p. 9254

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Q. Now, Mr. Hager, in view of all of the facts which you have discussed with respect to this system, would you say

Tr. p. 9255

that it is possible for Panhandle to make deliveries from this system during the winter of 1951-52 in excess of the maximum

deliveries which were made on this peak day, as to which you have testified? A. It might be possible to slightly increase the deliverability of the system if, up to a certain point, more gas was available on an exchange basis from Cities Service at that exchange connection, but I don't believe that it could be appreciably increased.

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Volume No. 144

HEARING—APRIL 5, 1954

Tr. p. 15,714

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By Mr. Littman:

Q. Will you please state your full name and address?
A. M. K. Hager, 1221 Baltimore, Kansas City, Missouri.
Q. You have heretofore testified in these consolidated proceedings from time to time, the last time being on August 8, 1951; is that correct?

Tr. p. 15,715

A. I don't remember the exact date. I think that is correct.
Q. I believe you will find that that is the date. I checked it personally. Subject to your check, I will proceed with the next question.
Mr. Walsh: Mr. Examiner, just to clarify the record, I

would like for Mr. Littman to specify the particular proceedings Mr. Hager testified to.
As I recall, he did testify in G-2101, Mr. Littman, so let us get the allocation.
Presiding Examiner: I think perhaps we had better get that, because the proceeding had not been consolidated at that time.
Mr. Littman: That is right. Mr. Hager testified in docket numbers G-1116 et al., that is, the series of dockets which were carried in the caption of docket number G-1116 et al., prior to this order issued on February 18, 1954, consolidating in with these some new dockets. That date was August 8, 1951, the last time he testified in the G-1116 et al. proceedings. It was to that matter that I was making reference.

Of course, the record shows all those things, but I thought it might be helpful to those present to have their recollections refreshed as to just how long ago it was that he testified.

Tr. p. 15,716

By Mr. Littman:

Q. Has there been any change in your status or duties in the Panhandle organization since that date, Mr. Hager? A. Yes, sir.

Q. Will you please state briefly such changes? A. At that time I was assistant to the president, and at the present time I am Vice President in Charge of Operations.

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Tr. p. 15,769

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By Mr. Littman:

Q. Now, Mr. Hager, we will discuss very briefly next the matter of the capacity of the Liberty lateral in which our friend, Mr. Seacat, has shown some interest.

At pages 9233 to 9303 of the transcript of the proceeding in docket number G-1116 et al., you testified, on

Tr. p. 15,770

August 7, 1951, regarding the capacity of the Liberty lateral, and you also, I believe in connection therewith, sponsored a map which was designated Exhibit number 400, which shows the Liberty lateral and environs; is that right? A. Yes, sir.

Q. You testified there that the capacity of that lateral—I am speaking now, of course, of the high pressure lateral of Panhandle—was approximately 14 thousand Mcf per day, as established by the deliveries or February 1, 1951,

when the mean temperature was zero degrees fahrenheit. Do you reall that? A. Yes, sir.

Q. Has anything occurred since you testified on August 7, 1951, which would cause you to change your opinion regarding the capacity of the Liberty lateral? A. No.

Q. Has anything been done to increase or to decrease the capacity of that lateral since you then testified? A. No, sir.

10624

Q. The record shows the breakdown of the deliveries on February 1, 1951, at the pages of the transcript which I referred to.

Has there been a day in January 1954, namely, January 20, when Panhandle's deliveries into the Liberty lateral

Tr. p. 15,771

and its deliveries from the Liberty lateral exceeded, in the aggregate, the total input and deliveries from the Liberty lateral on February 1, 1951? A. Yes, sir.

Q. Will you give us the details of the deliveries on that day so that we may compare them with the February 1, 1951 figures, which were the subject of the proceeding in the Third Circuit Court of Appeals?

Mr. Seacat: May I ask the date for my record?

Mr. Littman: January 20, 1954.

The Witness: May I confer with counsel off the record?

Presiding Examiner: Yes.

(Off the record discussion.)

Mr. Walsh: I hope this is going to be the witness' testimony, Mr. Examiner, and not that of counsel.

Presiding Examiner: Will you read the question, Mr. Reporter?

(Question read by the reporter.)

Presiding Examiner: I believe you amplified that off

the record by suggesting he present it in the same manner in which the answer was presented previously.

Mr. Littman: That is right. Your Honor heard me say that I thought he ought to present it in exactly the same detail as it appears in the record for February 1, 1951.

Presiding Examiner: That is what I want to get on the

Tr. p. 15,772

On January 20, 1954 that volume was 16,311 Mcf.

As far as we can tell, the losses, the unaccounted for on those days, were 212 Mcf on February 1, 1951 and 344 Mcf on January 20, 1954. It is impossible to get a real exact figure on that because of the numerous metering points.

Of the total inputs, then, to the lateral system, there was left for delivery on February 1, 1951, 20,713 Mcf. and on January 20, 1954, 25,131 Mcf.

On February 1, 1951, the 20,515 total delivery was broken down as follows: 12 thousand cubic feet, or 12 Mcf was delivered to Prairie Pipe Line Company. That is nothing but five or six houses.

Mr. Seacat: Could you give me the page to which you are referring so that I can watch it?

The Witness: I don't have that page, Mr. Seacat. I have a tabulation taken from the record here, and I am reading from that.

Mr. Walsh: That isn't in any document that has been incorporated in the record yet, Mr. Hager.

Mr. Littman: It is in this record, yes. It is at the pages of the transcript to which I referred earlier.

Presiding Examiner: That is the 1951 portion you mean?

Mr. Littman: Yes.

Presiding Examiner: Perhaps if you have a copy of that particular portion of the transcript there it might be helpful

Tr. p. 15,773

if the witness related it to it.

I think we ought to get this on the record, because I think Mr. Seacat is having trouble following it, too.

Mr. Seacat: If the Examiner please, there is in the record this map that was referred to, the earlier exhibit, which is a very admirable exhibit and gives every one of these points, and I am familiar with it.

Presiding Examiner: Will you give us the exhibit number of it, if you have it?

Mr. Littman: The map is exhibit 400. That is the one I referred to earlier. It is in the record.

Presiding Examiner: That is what I want to know.

Mr. Seacat: I have a copy of it, and those figures are very clearly on the map and very clearly on the record.

Presiding Examiner: If that is what we are talking about, exhibit 400——

Mr. Liddell: How much more of that tabulation do you have?

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Mr. Littman: There are just a few more figures left.

Presiding Examiner: Suppose we get the rest of these figures on so that we have them all in one place in the record.

The Witness: Shall I proceed?

Presiding Examiner: You may.

Mr. Liddell: May I ask a question: Was your last

Tr. p. 15,774

statement, February 15, 1951, the total, and you started to give the breakdown, 12,000 Prairie Pipe Line; is that the point?

The Witness: That is right. 12,000 Mcf related to those figures.

Then as I have there, 186 Mcf of the total was delivered to United Brick & Tile Company and Westinghouse Electric & Manufacturing Company, combined. They did not have a breakdown of those figures at that time.

The Louisburg Gas Company took 511 Mcf. The Central West Utility Company took 7,741 Mcf. The Gas Service Company took 10,220 Mcf. The Missouri Power & Light Company, for Excelsior Springs, took 2,043 Mcf.

Those add up to 20,515.

On January 20, 1954——

I was talking about the sales for resale. They add up to 20,515.

Mr. Flax: You name Westinghouse and United Brick and Tile. That is not a sale for resale, is it?

A. That is correct.

By Mr. Littman:

Q. What are the total sales? A. 20,713.

Now, on January 20, 1954——

Mr. Walsh: Can you refer us to some page?

Tr. p. 15,775

The Witness: It is just a tabulation I have written down, Mr. Walsh.

Mr. Littman: You will find it in response to the Commission's last questionnaire, these he is about to read now.

By Mr. Littman:

Q. Go right ahead and read them. A. There is an additional item shown as firm taps, company-owned house. Those are just right-of-way customers; 13 Mcf; for Prairie Pipe Line Company, 14 Mcf; United Brick and Tile Com-

pany, 380 Mcf; Westinghouse Electric & Manufacturing Company, 117 Mcf; Louisburg Gas Company, 501 Mcf; Central West Utility Company, 5249 Mcf; Gas Service Company, 15,965 Mcf; Missouri Power & Light Company for Excelsior Springs, 2,892 Mcf.

The sales for resale total 24,607. The direct sales total 524. The total sales are 25,131.

Mr. Walsh: Mr. Littman, may I ask a clarifying question?

Mr. Littman: Surely.

Mr. Walsh: The figures you have read, Mr. Hager, are they from sheet 1 of page 1, of item (viii) of Panhandle's response to the Commission's letter, Panhandles' response dated March 5, 1954?

Presiding Examiner: If the witness knows.

The Witness: I don't know. I am trying to find what

Tr. p. 15,776

he is referring to at the moment.

Mr. Walsh: The book from which you are reading is entitled "Information Submitted in response to Federal Power Commission letter dated March 5, 1954."

The Witness: That is the one I am reading from, yes, sir.

By Mr. Littman:

Q. But you werent' reading from that a minute ago, were you? A. No, sir. I had the things written out in another book.

By Mr. Walsh:

Q. Will you refer to that page now? A. I have it in front of me.

Q. Are those the same figures? A. Yes, sir, those are the same figures, except that I did refer to lost and un-

accounted for volume of 344 Mcf, which would make the net total of 15,967 shown there from Panhandle a total of actually 16,311 delivered into the high pressure Liberty lateral.

10630

By Mr. Littman:

Q. In other words, you filled out those figures to produce a gas balance, is that right? A. Yes, sir.

Q. What I am driving at is that you haven't given

Tr. p. 15,777

all these figures, and that is the next question.

Whereas you formerly testified that the capacity of this system is 14 thousand, approximately, Mcf, that is, the capacity of this system to carry Panhandle's gas, this Liberty lateral, you have testified here that on January 20, 1954, Panhandle actually delivered into this Liberty lateral 16,311 Mcf.

My question is: Will you explain why, in your opinion, this lateral was able to take and deliver some 2 thousand Mcf more than you had at one time testified was the capacity of this lateral?

Do you get my question? A. Yes, sir.

My testimony with respect to the approximate 14 thousand Mcf capacity of that lateral was to the effect that that was that capacity with the load distribution that we had at that time; that is, capacity is a function of load distribution on any pipe line, whether it is a lateral, or main line.

Now, actually, I think if you will add the deliveries at Excelsior Springs and Central West on the two days, on February 1, 1951 the total deliveries there are 9,784 Mcf. On January 20,

10631

1954, they were 8,141 Mcf.

The ability of the lateral to carry gas or to deliver gas to anybody is, as I said, a function of the load distribution, and there was a difference of 1600 Mcf less drelivered on January 20, 1954 than on February 1, 1951.

Tr. p. 15,778

By Mr. Littman:

Q. To those two large customers? A. To those two customers.

Q. And those customers are located way up at the northern end of the lateral; is that correct? A. They are located clear at the north end of the lateral.

Presiding Examiner: When you are talking about the north end of the lateral, you are talking about the delivery end of the lateral, the downstream end?

The Witness: The extreme end; that is right.

By Mr. Littman:

Q. That is up north and east of Kansas City, is it not? A. That is right.

Mr. Wirth: May I ask if the Excelsior Springs is the same as Missouri Power and Light Company?

The Witness: They are close together.

Mr. Wirth: But you used that figure?

The Witness: Oh, I was wrong. Yes, they are the same customer.

10632

Mr. Seacat: Maybe I can answer it.

You deliver gas at Excelsior Springs, or a point at the Missouri Power and Light Company, to be sold in Excelsior Springs; is that right?

Tr. p. 15,779

The Witness: That is right.

On February 1, 1951, and January 20, 1954, the takes at Louisburg were approximately the same. So, capacity-wise, that doesn't affect the problem.

By Mr. Littman:

Q. Louisburg is located very close— A. Located just a few miles from the input point of the lateral system.

Mr. Littman: That is shown on Exhibit 400, the map which is in evidence.

The Witness: The deliveries to others from the high-pressure system on February 1, 1951, that is, from the Liberty lateral itself, was 3,774 Mcf, and on January 20, 1954, it was 7,325 Mcf.

The difference in those two figures is due to the fact that we didn't have to sustain pressures on the lateral in order to make the higher deliveries at the extreme end of the lateral. Therefore, the quantity of gas that can be put into the liberty lateral at Louisburg compressor station and delivered through that lateral system is a function of where the deliveries have to be made.

By Mr. Littman:

Q. Have you completed your explanation involving a reconciliation of the two capacity figures which I gave you? A. I believe so.

Volume No. 153

Hearing—May 5, 1954

Tr. p. 17,057

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Mr. Littman: Mr. Examiner, before Mr. Hager takes the stand, I would like to have marked for identification several exhibits which represent responses to requests made of me at the last session for copies of certain papers.

First, it will be recalled, was a request that I present in exhibit form a copy of a so-called form letter written by Panhandle Eastern to its customers. In that regard I

would like to have marked for identification with the next exhibit number——

Presiding Examiner: May I have a copy of that to examine right now?

Mr. Littman: Yes.

Presiding Examiner: The next number is 693.

Tr. p. 17,058

Mr. Littman: I would like to have marked for identification as Exhibit 693 an exhibit consisting of four pages, the first page being a form of letter written by Panhandle Eastern

Pipe Line Company under date of January 8, 1954.

Presiding Examiner: Will you see to it that those pages are numbered at the bottom, in view of the fact that there appear to be the figures 2 and 3 on the letter at the top, and thus we have the third page being marked as page 2 and the fourth page as page 3? Those are the only markings on them. I suggest that in the lower righthand corner you mark them consecutively 1, 2, 3 and 4.

Mr. Littman: All right. Then we will delete the numbers at the top of the third and fourth pages and just number them from the bottom.

Then attached to it, I thought this ought to be made one exhibit because the second is an enclosure with the letter that I just referred to, the second one being a form of letter dated January , 1954, addressed to Panhandle Eastern Pipe Line Company, to be signed by Panhandle and the customer to whom the letter is addressed. These letters were sent to the customers.

Presiding Examiner: This is a form letter dated January 8, 1954, from Panhandle Eastern Pipe Line Company, sent out to various customers, together with a form of return

letter and related to the proposed Waverly storage of Panhandle Eastern Pipe Line.

That will be marked as No. 693 for identification.

(The document referred to was marked Exhibit No. 693, for identification.)

(Attached hereto as Appendix I.)

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Tr. p. 17,060

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Presiding Examiner: I might note that apparently although counsel in his request referred to them as orders, the title of each one of these exhibits appears to be "Opinion and amendatory order."

Mr. Littman: That is right.

Mr. Examiner, I would like to offer these in evidence. They have been furnished by me at the request of counsel, and I believe that I have dispensed with that obligation.

Presiding Examiner: Under the circumstances, I will ask first if the man who knows most about them has any objection?

Mr. Wirth.

Mr. Wirth: No, I have no objection.

Mr. Seacat: Might I inquire of Mr. Littman if he will admit that Exhibit No. 693, or a copy thereof, was not sent to the Central West Utility Company?

Mr. Littman: I think that is a good assumption. I don't know that, as a matter of fact, but I assume that such a letter

Tr. p. 17,061

was not sent to them. I will take your word for it.

Presiding Examiner: I believe he said it was sent to some of them.

Mr. Seacat: I heard that, too.

Mr. Littman: Let's put it this way: I feel certain that copies of this exhibit were not sent to the four companies who

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have not executed service agreements with Panhandle, or with whom Panhandle has not executed service agreements.

Presiding Examiner: That is a better way to put it, under the circumstances.

Mr. Littman: The four being Central West Utility, Texas Gas Transmission, Michigan Consolidated Gas Company, and The Gas Service Company.

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Tr. p. 17,062

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(Exhibits Nos. 693, 694 and 695, heretofore marked for identification, were received in evidence.)

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Volume No. 156

HEARING—MAY 10, 1954

Tr. p. 17,501

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By Mr. Flax:

Q. I refer to the fact that on January 20, 1954, you show the input to the Liberty lateral to be 16,311 Mcf. Would you say that is the maximum input that you might put into the Liberty lateral?

(Mr. Hager)

A. I think with the load conditions like they are, yes, sir. I have said before, also, that the ability to put gas into the

Liberty lateral, that is, the ability of the lateral therefore to take it and handle it through the many delivery points, is a function—that is, it varies with respect to where the gas is taken off the lateral. On that day where the west side of the low pressure system apparently handled about four million cubic feet, then our ability to put into the Liberty lateral was that four million cubic feet plus what Louisburg took. If there had been much more ability and deliverability within the high pressure lateral itself to deliver gas then to Liberty

Tr. p. 17,502

and Excelsior, higher pressures than those which are shown would have resulted.

As I understand it, those are just about the minimum pressures they can get along with up there. That is the reason I think the lateral with that low distribution on it—you can say that was the maximum ability of the lateral to handle gas.

Q. Since for the most part it appears those were the maximum non-coincidental volumes that have been delivered by Panhandle, would you say that is just about the extreme condition that you will meet as to demands or that you could meet as to demands from the customers? A: The trouble I have with your question, when you say "the extreme condition," you are saying in the aggregate regardless of where it goes?

Q. Since those apparently were either the greatest volume

or close to the greatest volume taken by all customers on an individual basis during the winter, then that was pretty much the extreme of conditions that you would have met

in the past winter. A. I think as far as the past winter is concerned, yes, sir.

Q. And if the requirements were to remain approximately in the same proportions, requirements of the various customers, would you say that Panhandle could still deliver the total

Tr. p. 17,503

volumes that were delivered on the January 20, 1954, date? A. You are saying if the volumes that were delivered remained the same. Are you saying the same proportion? If so, that puts a twist on it that I cannot analyze. What do you mean?

Q. Say if the requirements of all parties were to increase by ten per cent.

Presiding Examiner: On the lateral?

Mr. Flax: Yes, were to increase by ten per cent.

By Mr. Flax:

Q. Then could Panhandle still deliver approximately 25,000 Mcf on a minimum (maximum) day on the lateral? A. In a sense, Panhandle did not deliver 25,000, approximately, of its own gas; it delivered approximately 16,000 Mcf of its own gas and approximately 9,000 Mcf of gas which came into the low pressure system from the Cities Service Gas Company. When I have been talking about capacity, I have been talking about the 16,000 referred to the high pressure line only. There again I

10639

can only tell you that you have to be definite about how much gas you are talking about and where on that lateral system.

Q. In regard to the volume being taken from Cities Service Gas Company, what are the limitations on the volume

taken from them on that lateral? A. I believe it would be the ability of that section

Tr. p. 17,504

of the low pressure system east of the Blue River to handle it as compared to the ability of Cities Service to get it there. Some place along the line I think Cities Service would have to be consulted.

Mr. Wirth: May I ask if Panhandle instructs Cities Service as to how much gas they want delivered on what determines that amount?

The Witness: There is an exchange agreement. There has been an exchange agreement. I think it is in this record. We have written a notice cancelling the exchange agreement which provides for the quantities.

Mr. Littman: That exchange agreement is in evidence.

Presiding Examiner: I think Mr. Wirth's question goes to whether that provides for a definite amount or whether that is something which is variable.

Mr. Wirth: What I wanted to know is the opening procedure as to how you operated. Does your company daily tell Cities Service how much gas you want, or how do you determine what they put in?

The Witness: The exchange agreement works every day, in effect, and the dispatchers arrange between themselves as to how much should be delivered within the local area and how much in turn should be redelivered over in Johnson County. The dispatchers work within the confines of the exchange agreement, or did work as long as the exchange agreement was

Tr. p. 17,505

in force.

Presiding Examiner: Is there any maximum amount specified in the exchange agreement?

The Witness: Yes, sir.

Presiding Examiner: What is that?

The Witness: That started out with a base figure, and it had an escalator provision in it. I do not remember what the current amount is.

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Tr. p. 17,509

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By Mr. Flax:

Q.-Have you ever put more than 16,311 Mcf into the Louisburg lateral? A. I don't believe we have.

Tr. p. 17,510

Q. Have you ever received any more than 9,164 Mcf from Cities Service Gas Company through the exchange arrangement?

A. I am quite sure we have not on that.

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Tr. p. 17,512

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By Mr. Wood:

Q. Mr. Hager, when you testified in this cause, Docket No. G-1116, in August of 1951 at pages 9299 and 9301 of the transcript, you were asked whether Panhandle Eastern had any plans to construct or improve the capacity of the

T. p. 17,513

Liberty lateral. At that time you answered, "No, they had no such plans." Has there been any change in that situation since August 8, 1951? A. There has been no change.

Q. In other words, do I understand it to be your testi-

mony that Panhandle Eastern does not intend to do anything to increase the capacity of the Liberty lateral over and above the figure that you testified to just a few moments ago of some 16,311 Mcf? A. We have no plans. I will have to put it that way.

Q. Has there been any discussion about improving the capacity over and above that figure, to your knowledge?

Mr. Littman: I object. He said there is no plan. What is the use talking about whether——

Presiding Examiner: I think since he said they had no

plan, if there is some significance, I think we are entitled to probe what has been done.

The Witness: We haven't made any studies. I think we have had to come to the conclusion that we had to find out where we stand first with respect to where we are before we can do anything.

By Mr. Wood:

Q. Where you stand with respect to where you are. What do you mean by that? A. I am talking about this case.

Tr. p. 17,514

Q. Mr. Hager, it has been stipulated, as I recall, that none of the exhibits which have been referred to as the Waverly letters, Exhibit No. 693 and I believe perhaps Exhibit No. 694, were sent to Central West Utility Company. That is correct, is it not? A. As I understand, it was not sent.

Q. Does that mean, and is it your testimony then, that upon the completion of the Waverly storage unit a customer such as Central West is not going to receive any of the advantage or benefit of that storage unit?

Mr. Littman: I object to that. Mr. Examiner, actually

this entire procedure is improper. The cross examination of this witness on behalf of Central West was originally conducted by Mr. Seacat. Now Mr. Wood has taken over a brand new line of inquiry not suggested by anything that has preceded. It is improper on

10643

those two bases.

Mr. Liddell: I will join in that objection because this is not matter that has been brought out by reason of cross-examination, but it is a new departure and goes beyond the cross examination.

Presiding Examiner: I am inclined to think the last question goes a little beyond. I don't think the others did. I think the others might be tied to cross examination by staff counsel.

Mr. Wood: I Your Honor please, I thought in my opinion

Tr. p. 17,515

it was connected to his answer about any plans. I wanted to inquire of the witness concerning that previous answer he made. Mr. Seacat and I tried to combine on our examination to be considerate of all your time.

Presiding Examiner: The previous question was within staff counsel's examination.

Mr. Liddell: Will you read the question, please?

Presiding Examiner: Read the question back.

(The pending question was read by the reporter.)

Presiding Examiner: I think you should limit that to Central West and not say "customer," because I think that is too indefinite.

Mr. Liddell: Isn't the testimony of the witness that the Waverly plan or program is so indefinite that there is no possibility of an answer to that question?

Presiding Examiner: He has asked the meaning of his previous answer and that is all.

The Witness: My previous answer was that we had made no studies; that we had to find out where we stood with respect to our rights as where we are now on the capacity question.

Going to the Waverly thing, my only testimony has been that we have not filed for that. We are testing it. I am not able to answer your question.

Tr. p. 17,516

By Mr. Wood:

Q. Even assuming you determined it to be practicable to go ahead with the Waverly storage project, you haven't considered any plans with respect to the Liberty lateral to increase the amount of gas carried through that by reason of the assumption the Waverly storage is a practicable and feasible project for Panhandle Eastern?

Presiding Examiner: Wait a minute. That question must be limited to "carry through ~~the Li~~berty lateral with the present facilities of that lateral"; otherwise, it is not proper to the proceeding. If so limited, I will let the witness answer.

Mr. Wood: For the purpose of this question, I will so limit it.

The Witness: My answer is that the Waverly storage field question has no application. We are willing to put in through

this lateral system all that lateral system can carry. We have so stated. We tried to tell everybody what the maximum capacity of that lateral system is. We are willing to supply that subject to what my counsel has to say about where we stand with respect to the abandonment cases.

Waverly absolutely does not enter that proposition, Mr. Wood. It is a matter conditioned on present capacity.

10652

Hearing Exhibit No. 109

TABLE 1

POPULATION—KANSAS CITY METROPOLITAN AREA 4 COUNTIES—1940-1950

	Metr. Area	Jackson County Mo.	Clay County Mo.	Wyandotte County Kans.	Johnson County Kans.
Population					
1940	686,643	477,828	30.417	145,071	33,327
1950	814,357	541,035	45,221	165,318	62,783
Gain 1940-50	127,714	63,207	14,804	20,247	29,456
% Increase	18.6	13.2	48.7	14.0	88.4

Population U. S. A.

Gain 1940-1950	18,186,317
% Increase	14.2

Source—U. S. Census. The Kansas City Metropolitan Area gained 18.6 per cent between 1940 and 1950, as compared with a gain of 14.2 per cent for the United States as a whole. Clay County increased more rapidly in this decade than any other county in Missouri.

10653

Hearing Exhibit No. 110

TABLE 2

Population—Kansas City Metropolitan Area and Clay County, 1940-1970

	1940	1950	1954	1960	1970
Metropolitan Area	686,643	814,357	900,000	1,062,000	1,300,000
Clay County (total)	30,417	45,221	64,100	84,000	122,000
Kansas City North (part of K. C., Mo.)	5,929	13,797	21,500	32,000	50,000
North Kansas City	2,688	3,886	5,450	5,900	6,650
Liberty (city)	3,598	4,709	6,200	8,000	11,000
Gallatin Township	12,332	24,892	38,400	54,000	80,500
Liberty Township	6,034	7,436	10,100	14,000	21,000

The Kansas City Metropolitan Area as shown above for 1940, 1950 and 1954 consists of 4 counties (Clay and Jackson in Missouri, Wyandotte and Johnson in Kansas). In forecasting for 1960 and 1970, however, it is anticipated a fifth county (Platte in Missouri) will be part of the Kansas City Metropolitan Area. Estimates of Platte County are therefore included in 1960 and 1970 population.

Sources—U. S. Census for 1940 and 1950, and estimates of the City Plan Commission of Kansas City, Missouri, for 1954, 1960 and 1970.

10654

Hearing Exhibit No. 111

TABLE 3

Industrial Districts

	Industrial Development Property Evaluation 1950	Employment 1954
North Kansas City Clay County	$107,835,000 *	15,750 *
Wabash Claycomo in Clay County	30,000,000 (1951) for Ford plant	5,000
Northeast Kansas City, Mo.	59,633,000	4,300
Fairfax Wyandotte County, Kansas	138,276,000	30,000

Sources—"Economic Importance of Flood Protection for the Kansas Cities, 1953", a report of the City Plan Commission and other organizations; "Locational Cost in Industrial Districts of Greater Kansas City", a report of the City Plan Commission; files of City Plan Commission; the Fairfax Development Company.

* Includes Municipal Airport of Kansas City, Missouri.

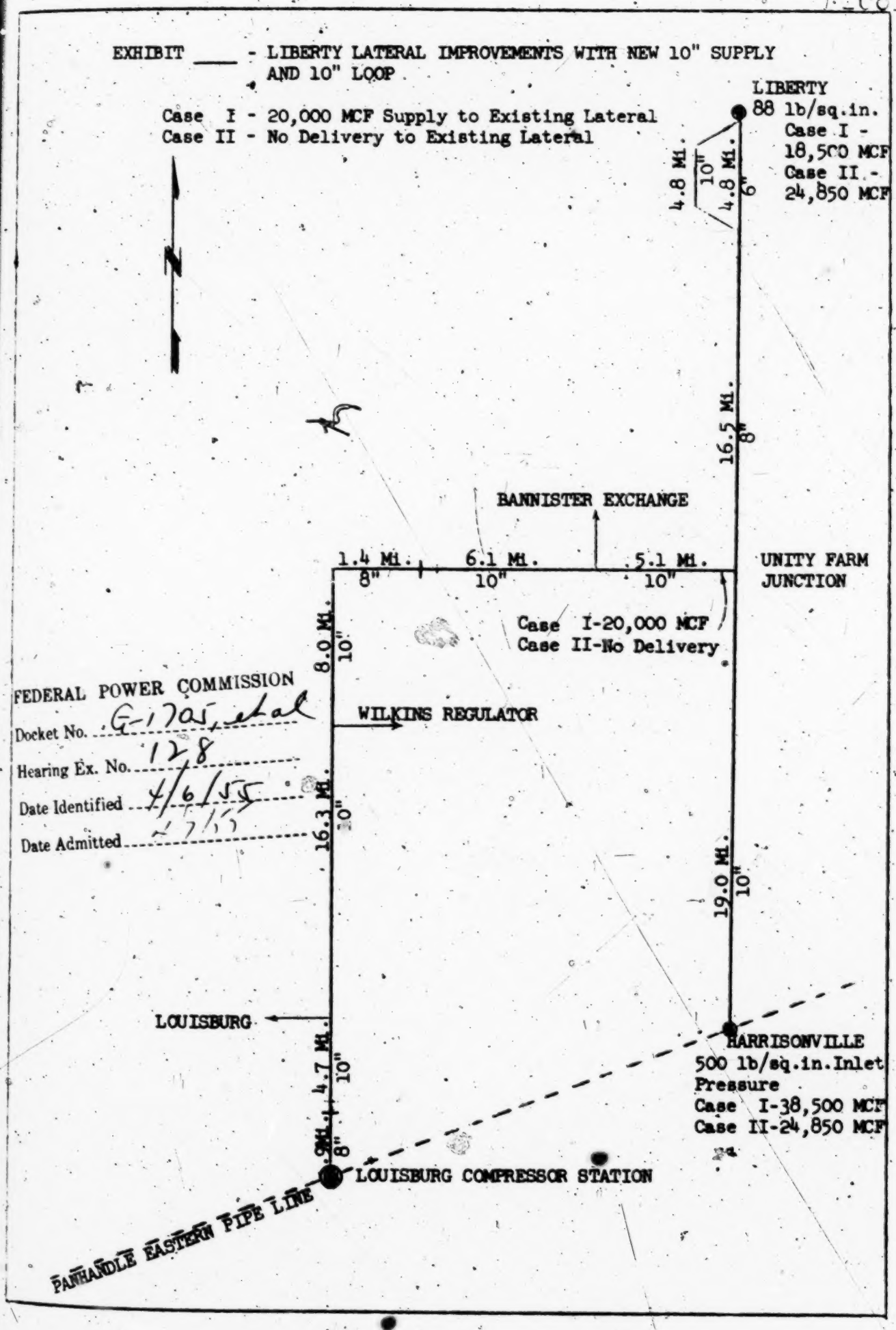
Note

Page 788 is blank;
Pages 789 and 790 are
on Card 18.

Hearing Exhibit No. 128

(10810)

10810



Hearing Exhibit No. 129

(10811)

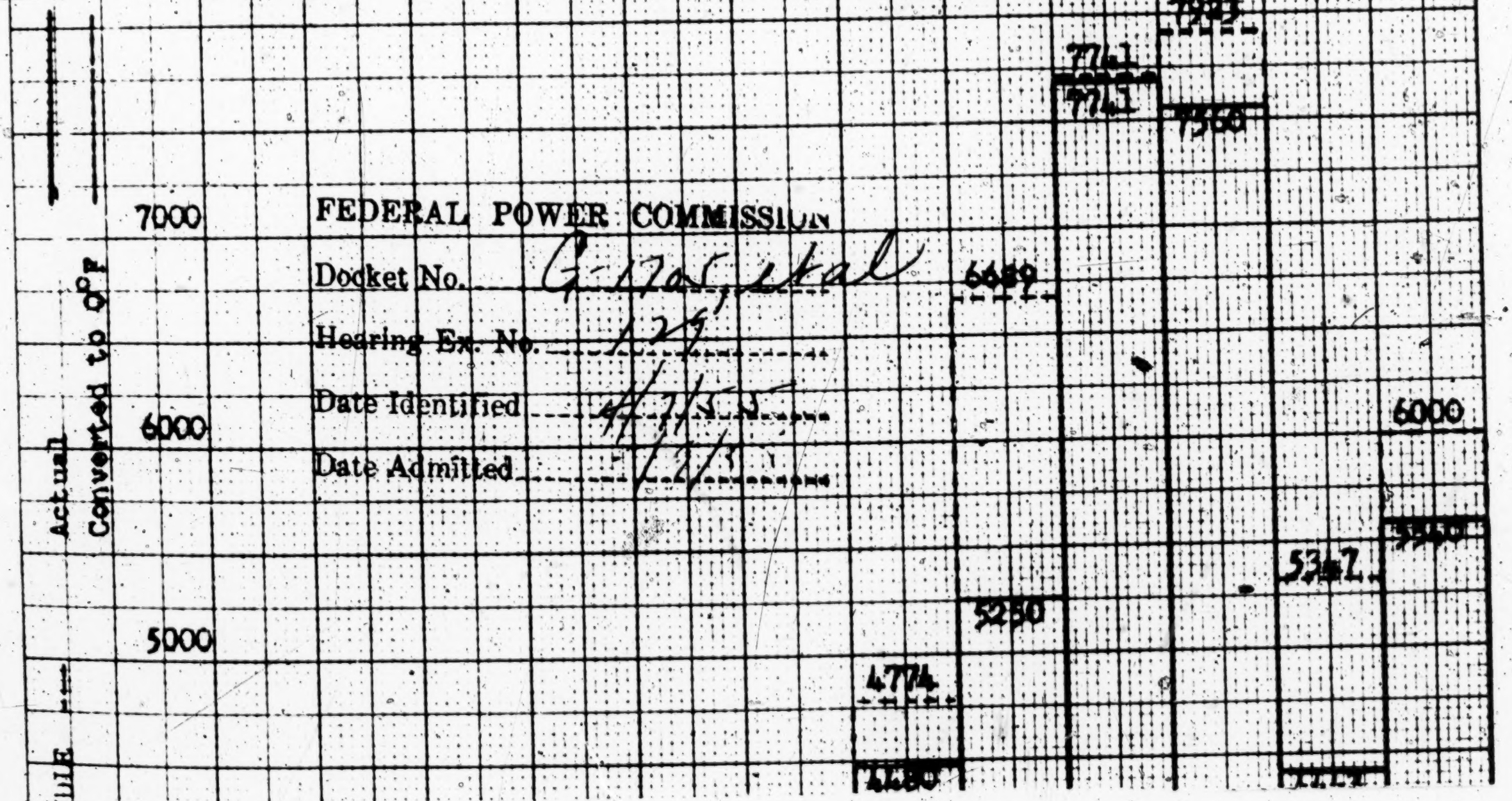
10811

Exhibit No. 129

Missouri Division

THE CENTRAL WEST UTILITY COMPANY

Graph showing actual peak day purchases by Central West from Panhandle and such purchases converted to 0°F. for Clay County, Missouri territory before and after sale of Kansas City North and Avondale system to Gas Service Company.



FEDERAL POWER COMMISSION

Docket No. G-1705, et al

Hearing Ex. No. 129

Date Identified 4/7/55

Date Admitted 4/7/55

10812

PLATTE CITY

PLATTE COUNTY

SMITHVILLE

CLAY COUNTY

EXCELSIOR SPRINGS

MISSOURI

KANSAS

MISSOURI

RIVER

PARKVILLE

WYANDOTTE COUNTY

KANSAS CITY KANS.

N.K.C.

KANSAS CITY MO.

INDEPENDENCE

JACKSON COUNTY

KANSAS MISSOURI

PANHANDLE EASTERN

N

FEDERAL POWER COMMISSION

Docket No. G-1705 et al

Hearing Ex. No. 130

Exhibit
Docket G-2433
Central West Utility Co.

ANALYSIS OF COST OF LATERAL IMPROVEMENTS

Exh. No.	Name of Lateral	Maximum Day's Capacity(MCF) As is	To be	Increase	Tr. page	Estimated Cost of Improvement*	Av. Cost of Increase per MCF
18	Peoria-Clinton	131,000	191,360	60,360	343	$2,564,000	
	Clinton	(figures included above)			379	125,000	
						$2,689,000	$44.55
20	Arthur	1,000	1,600	600	345	59,700	99.50
21	Villa Grove	900	1,500	600	346	45,200	75.33
22	Greenfield	3,500	5,500	2,000	346	85,000	42.50
23	Winchester	8,500	10,500	2,000	347	62,000	31.00
24	Kokomo-Tipton	19,000	28,000	9,000	347	102,000	11.33
25	Fort Wayne	45,000	51,000	6,000	348	166,300	27.71
26	Anderson	(new line)		21,000	379	291,000	13.86
						$3,500,200	
	Anderson Lateral M & R Station					34,650	
	Sub-total					$3,534,850	
	Contingencies 3%					106,050	
		101,560				$3,640,900	$35.84

* Exhibit 10 (Witness Bergman)

FEDERAL POWER COMMISSION
Docket No. G-1705, etal
Hearing Ex. No. 131
Date Identified 4/7/55
Date Admitted Rejected 4/7/55

Hearing Exhibit No. 131

(10813)

10813

Hearing Exhibit No. 132

(10814)

10814

Exhibit No.
Central West Utility Co.
Page 1 of 5

BEFORE THE
FEDERAL POWER COMMISSION

In the Matter of Panhandle Eastern Pipe Line Company	)	Dockets Nos. 1705, et al. (Consolidated)
In the Matter of Panhandle Eastern Pipe Line Company	)	Docket No. G-2433

MARKET DATA

being a

SEGREGATION AND ANALYSIS OF STATISTICS AS TO (1) LIBERTY LATERAL AND (2) LATERALS INCLUDED IN PANHANDLE'S APPLICATION IN DOCKET G-2433, AS CONTAINED IN EXHIBIT X FILED WITH APPLICATION FOR CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY IN SUCH DOCKET.

PRESENTED BY

CENTRAL WEST UTILITY COMPANY

Intervenor and Protestant

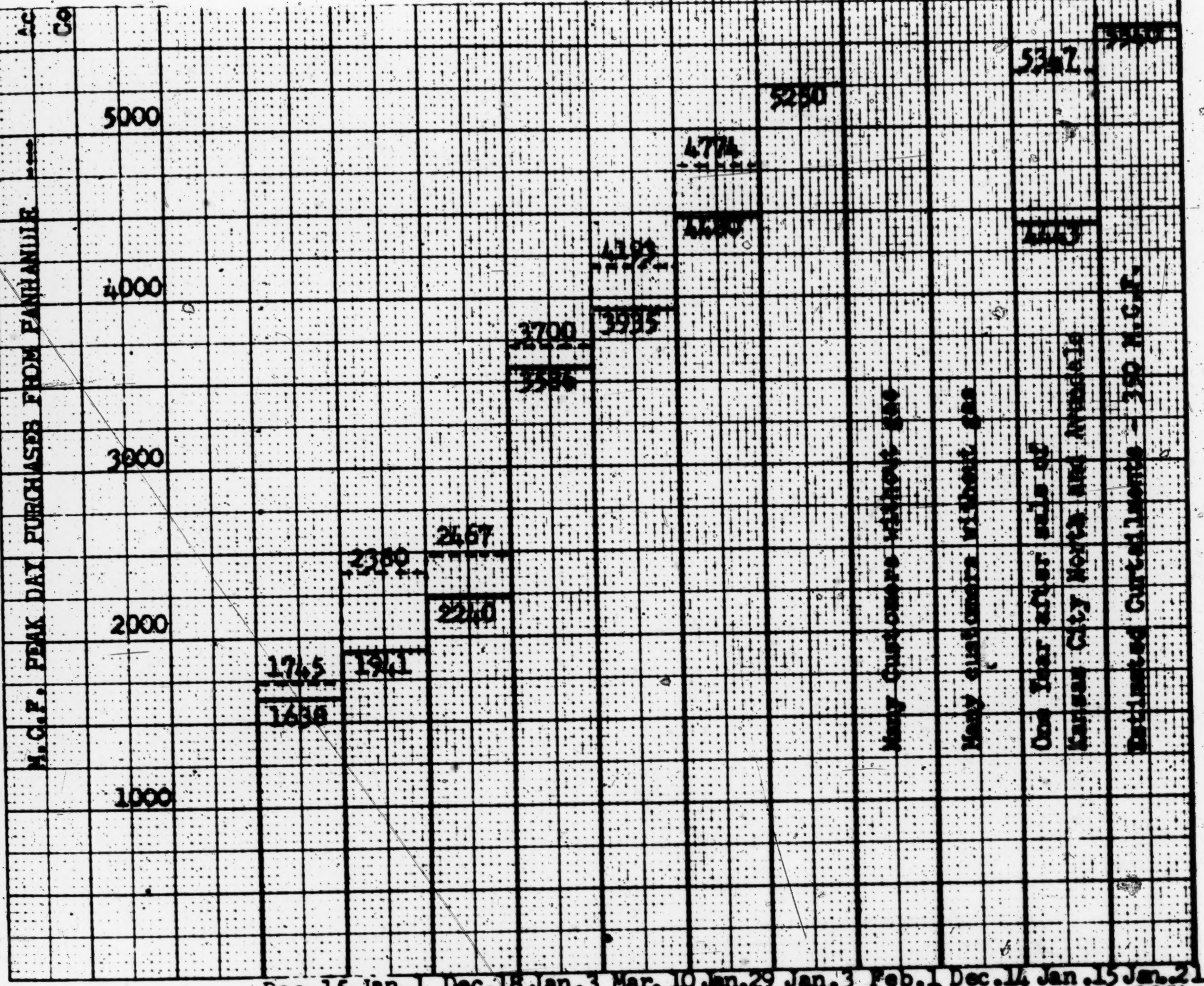
FEDERAL POWER COMMISSION
Docket No. G-1705, et al
Hearing Ex. No. 132
Date Identified 4/7/55
Date Admitted Rejected 4/7/55

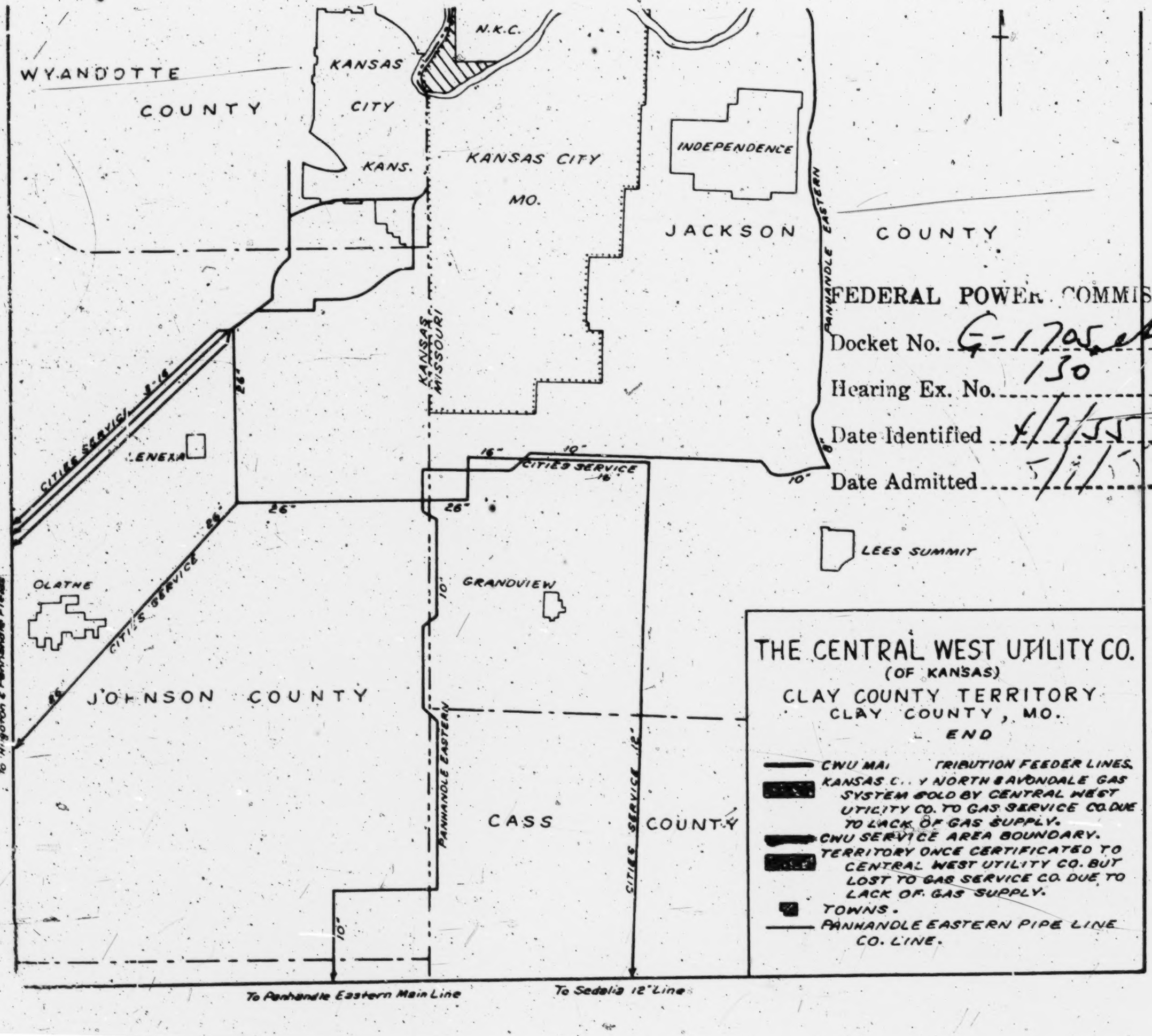
FIVE-YEAR INCREASE IN NUMBER OF CUSTOMERS

		Ref. to Exhibit X	1953	1957	Percentage of Five-Year Increase
(1) LIBERTY LATERAL					
Louisburg (Ks)	LGCO		(Figures not shown)		
Lee's Summit et al.(Mo)	GSCO(Mo.Local)	X-2,p.23	7815	15526	
Liberty (Mo) et al.	CWUCO	X-6, p. 2	2477	4357	
Excelsior Springs (Mo)	MPLCO	X-10,p.23	1444	1663	
Totals - Liberty Lateral			11736	21546	83.6
(2) LATERALS INCLUDED IN ENLARGEMENT PROGRAM					
PEORIA-CLINTON LATERAL - (Exhibit 18)					
Springfield (Ill)	CILCO	X-14,p.16	27648	31038	
Peoria (Ill)	"	X-14,p. 9	56500	63207	
Clinton (Ill)	IPCO	X-17,p.14	1896	2200	
Galesburg (Ill)	"	X-17,p.29	11931	13000	
Lincoln (Ill)	CIEGCO	X-13,p. 2	2882	3484	
Canton (Ill)	CIPSCO	X-15,p. 9	7893	8500	
Morton (Ill)	MMGCO	X-18,p. 1	1263	1401	
Totals - Peoria-Clinton Lateral			110013	122830	11.6
ARTHUR LATERAL - (Exhibit 20)					
Arthur (Ill)	CGCO	X-16,p. 9	580	681	17.4
VILLA GROVE LATERAL - (Exhibit 21)					
Villa Grove	CGCO	X-16,p.44	697	763	9.5
GREENFIELD LATERAL -(Exhibit 22)					
Greenfield (Ind)	GGCOI	X-23,p.16	2138	2511	
Fortville (Ind)	"	X-23,p. 9	772	870	
Pendleton (Ind)	PNGCO	X-32,p. 1	917	1120	
Totals - Greenfield Lateral			3827	4501	17.6
WINCHESTER LATERAL - (Exhibit 23)					
Winchester (Ind)	OVGCORP	X-31,p. 9	4753	5050	6.2
KOKOMO-TIPTON LATERAL - (Exhibit 24)					
Kokomo (Ind)	KGFCO	X-27,p. 2	11512	14000	21.6
Tipton (Ind)	IGWCO		(Figures not shown)		
FORT WAYNE LATERAL - (Exhibit 25)					
Fort Wayne (Ind)	NIPSCO	X-30,p. 2	45669	49896	9.2
ANDERSON LATERAL -(Exhibit 26)					
Anderson	CIGCO		(Figures not shown)		
TOTALS OF LATERALS INCLUDED IN ENLARGEMENT PROGRAM			177051	197721	11.6

FIVE-YEAR INCREASE IN ANNUAL GAS REQUIREMENTS

		Ref. to Exhibit X	1953	1957	Percentage of Five-Yr. Increase
			MMCF		
(1) LIBERTY LATERAL					
Louisburg (Ks)	LGCO		(Figures not shown)		
Lee's Summit et al.(Mo)	GSCO(Mo.Local)	X-2,p.24	1471.9	2760.4	
Liberty (Mo) et al.	CWUCO	X-6, p. 3	574.8	1040.2	
Excelsior Springs (Mo)	MPLCO	X-10,p.24	355.6	391.7	
Totals - Liberty Lateral			2402.3	4192.3	74.5
(2) LATERALS INCLUDED IN ENLARGEMENT PROGRAM					
PEORIA-CLINTON LATERAL - (Exhibit 18)					
Springfield (Ill)	CILCO	X-14,p.17	4770.0	6965.0	
Peoria (Ill)	"	X-14,p.10	13612.0	18508.0	
Clinton (Ill)	IPCO	X-17,p.15	147.0	344.0	
Galesburg (Ill)	"	X-17,p.30	1456.0	2595.0	
Lincoln (Ill)	CIEGCO	X-13,p. 3	973.0	1420.0	
Canton (Ill)	CIPSCO	X-15,p.10	1129.3	2199.2	
Morton (Ill)	MMGCO	X-18,p. 2	335.5	395.0	
Totals - Peoria-Clinton Lateral			22422.8	32426.2	44.5
ARTHUR LATERAL - (Exhibit 20)					
Arthur (Ill)	CGCO	X-16,p.10	123.7	153.5	24.1
VILLA GROVE LATERAL - (Exhibit 21)					
Villa Grove	CGCO	X-16,p.45	126.2	148.2	17.4
GREENFIELD LATERAL - (Exhibit 22)					
Greenfield (Ind)	GGCOI	X-23,p.17	377.0	444.0	
Fortville (Ind)	GGCOI	X-23,p.10	137.0	155.0	
Pendleton (Ind)	PNGCO	X-32,p. 2	146.5	200.0	
Totals - Greenfield Lateral			660.5	799.0	20.9
WINCHESTER LATERAL - (Exhibit 23)					
Winchester (Ind)	OVGCORP	X-31,p.10	465.2	713.2	53.3
KOKOMO-TIPTON LATERAL - (Exhibit 24)					
Kokomo (Ind)	KGFCO	X-27,p. 3	4080.0	6190.0	51.7
Tipton (Ind)	IGWCO		(Figures not shown)		
FORT WAYNE LATERAL					
Fort Wayne (Ind)	NIPSCO	X-30,p. 3	6682.0	9398.0	40.6
ANDERSON LATERAL - (Exhibit 26)					
Anderson	CIGCO		(Figures not shown)		
TOTALS OF LATERALS INCLUDED IN ENLARGEMENT PROGRAM			34560.4	49828.1	44.2


M.C.F. PEAK DAY PURCHASES FROM PANHANDLE
5000
4000
3000
2000
1000
1745
1638
2380
1941
2467
2240
3700
3586
4193
3935
4774
5250
5347
Many Customers without gas
Many customers without gas
One Year after sale of
Kansas City North and Arkansas
Estimated Curtailments - 350 M.C.F.
Dec.15 1943
Jan.1 1945
Dec.18 1945
Jan.3 1947
Mar.10 1948
Jan.29 1949
Jan.3 1950
Feb.1 1951
Dec.14 1951
Jan.15 1953
Jan.21 1954



FEDERAL POWER COMMISSION

Docket No. G-1705 et al

Hearing Ex. No. 130

Date Identified 4/7/54

Date Admitted 5/11/54

Hearing Exhibit No. 130

(10812)

FIVE-YEAR INCREASE IN PEAK-DAY GAS REQUIREMENTS

		Ref. to Exhibit X	1953-1954	1957-1958	Percentage of Five-Yr. Increase
			M C F		
(1) LIBERTY LATERAL					
Louisburg (Ks)	LGCO		(Figures not shown)		
Lee's Summit et al.(Mo)	GSCO(Mo.Local)	X-2 ,p.25	15516	28204	
Liberty (Mo) et al.	CWUCO	X-6, p. 4	7362	11670	
Excelsior Springs (Mo)	MPLCO	X-10,p.25	3528	4425	
Totals - Liberty Lateral			26406	44299	67.7
(2) LATERALS INCLUDED IN ENLARGEMENT PROGRAM					
PEORIA-CLINTON LATERAL - (Exhibit 18)					
Springfield (Ill)	CILCO	X-14,p.18	40220	57200	
Peoria (Ill)	"	X-14,p.11	79310	116920	
Clinton (Ill)	IPCO	X-17,p.26	1690	3676	
Galesburg (Ill)	"	X-17,p.31	12758	21918	
Lincoln (Ill)	CIEGCO	X-13,p. 4	6700	9900	
Canton (Ill)	CIPSCO	X-15,p.11	6610	16648	
Morton (Ill)	MMGCO	X-18,p. 3	2300	2794	
Totals - Peoria-Clinton Lateral			149588	229056	53.1
ARTHUR LATERAL - (Exhibit 20)					
Arthur (Ill)	CGCO	X-16,p.11	1008	1327	31.6
VILLA GROVE LATERAL - (Exhibit 21)					
Villa Grove	CGCO	X-16,p.46	1080	1264	17.0
GREENFIELD LATERAL - (Exhibit 22)					
Greenfield (Ind)	GGCOI	X-23,p.18	3267	3883	
Portville (Ind)	"	X-23,p.11	1188	1360	
Pendleton (Ind)	PNGCO	X-32,p. 3	1319	1940	
Totals - Greenfield Lateral			5774	7183	24.5
WINCHESTER LATERAL - (Exhibit 23)					
Winchester (Ind)	OVGCORP	X-31,p.11	4608	6388	38.6
KOMO-TIPTON LATERAL - (Exhibit 24)					
Kokomo (Ind)	KGFCO	X-27,p. 4	25200	39190	55.5
Tipton (Ind)	IGWCO		(Figures not shown)		
FORT WAYNE LATERAL - (Exhibit 25)					
Fort Wayne (Ind)	NIPSCO	X-30,p. 4	43852	62824	43.2
ANDERSON LATERAL -(Exhibit 26)					
Anderson	CIGCO		(Figures not shown)		
TOTALS OF LATERALS INCLUDED IN ENLARGEMENT PROGRAM			231110	347232	50.2

PANHANDLE EASTERN PIPE LINE COMPANY

Tabulation of Estimated Monthly Sales, Company Use, and Deliveries
East and West of Liberal, Kansas
Years 1956 and 1957

MCF

	January	February	March	April	May	June	July	August	September	October	November	Decemb
1956												
Main Line East of Liberal												
Firm Sales	32 718 250	30 209 050	30 580 050	28 299 300	26 986 850	24 812 800	25 296 150	25 632 650	25 290 400	29 888 850	29 429 200	32 730
Interruptible Sales	972 950	954 250	1 091 050	1 513 000	1 811 650	1 746 500	1 669 450	1 615 650	1 359 700	1 213 550	1 188 300	989
Company Use	1 708 200	1 578 200	1 595 800	1 503 900	1 503 900	1 429 700	1 466 800	1 466 800	1 448 300	1 578 200	1 559 600	1 726
Loss	229 500	214 800	229 500	222 200	229 600	222 200	229 500	229 500	222 200	229 600	222 200	229
Total Main Line East of Liberal	35 628 900	32 956 300	33 497 400	31 538 400	30 532 000	28 211 200	28 661 900	28 944 600	28 320 600	32 910 200	32 399 300	35 676
West of Liberal and Field												
Sales	104 000	97 200	104 000	100 600	103 900	100 600	103 900	103 900	100 600	103 900	100 600	104
Company Use	857 900	792 600	802 000	755 300	755 300	718 000	736 700	736 700	727 300	792 600	783 300	867
Loss	71 600	67 000	71 600	69 300	71 600	59 300	71 500	71 500	69 300	71 600	69 300	71
Total West of Liberal and Field	1 033 500	956 800	977 600	925 200	930 800	887 900	912 100	912 100	897 200	968 100	953 200	1 042
Total Deliveries	36 662 400	33 913 100	34 475 000	32 463 600	31 462 800	29 099 100	29 574 000	29 856 700	29 217 800	33 878 300	33 352 500	36 719
1957												
Main Line East of Liberal												
Firm Sales	33 937 150	30 045 400	29 945 050	28 067 600	28 558 350	26 809 100	27 752 650	27 532 650	27 724 500	29 742 950	29 783 500	34 020
Interruptible Sales	783 850	360 500	1 149 950	1 720 000	1 755 850	1 941 500	1 901 950	1 924 350	1 287 200	1 287 950	1 266 300	701
Company Use	1 798 000	1 569 000	1 607 000	1 530 000	1 569 000	1 473 000	1 530 000	1 530 000	1 569 000	1 626 000	1 588 000	1 741
Loss	237 100	214 200	237 200	229 600	237 200	229 600	237 200	237 200	229 600	237 200	229 600	237
Total Main Line East of Liberal	36 756 100	32 189 100	32 939 200	31 547 200	32 120 400	30 453 200	31 421 800	31 224 200	30 810 300	32 894 100	32 867 400	36 699
West of Liberal and Field												
Sales	108 700	98 100	108 700	105 200	108 700	105 100	108 600	108 600	105 100	108 700	105 100	108
Company Use	886 300	781 400	800 500	762 400	781 500	733 800	762 400	762 400	781 500	810 000	800 500	867
Loss	73 600	66 400	73 600	71 200	73 600	71 200	73 500	73 500	71 200	73 600	71 200	73
Total West of Liberal and Field	1 068 600	945 900	982 800	938 800	963 800	910 100	944 500	944 500	957 800	992 300	976 800	1 049
Total Deliveries	37 824 700	33 135 000	33 922 000	32 486 000	33 084 200	31 363 300	32 366 300	32 168 700	31 768 100	33 886 400	33 844 200	37 749

FEDERAL POWER COMMISSION
Docket No. G-1202, et al
Hearing Ex. No. 135-A
Date Identified 4-11-58
Date Admitted 4-11-58

(p. 799)

PANHANDLE EASTERN PIPE LINE COMPANY

Tabulation of Estimated Monthly Sales, Company Use, and Deliveries
East and West of Liberal, Kansas
Years 1956 and 1957

MCF

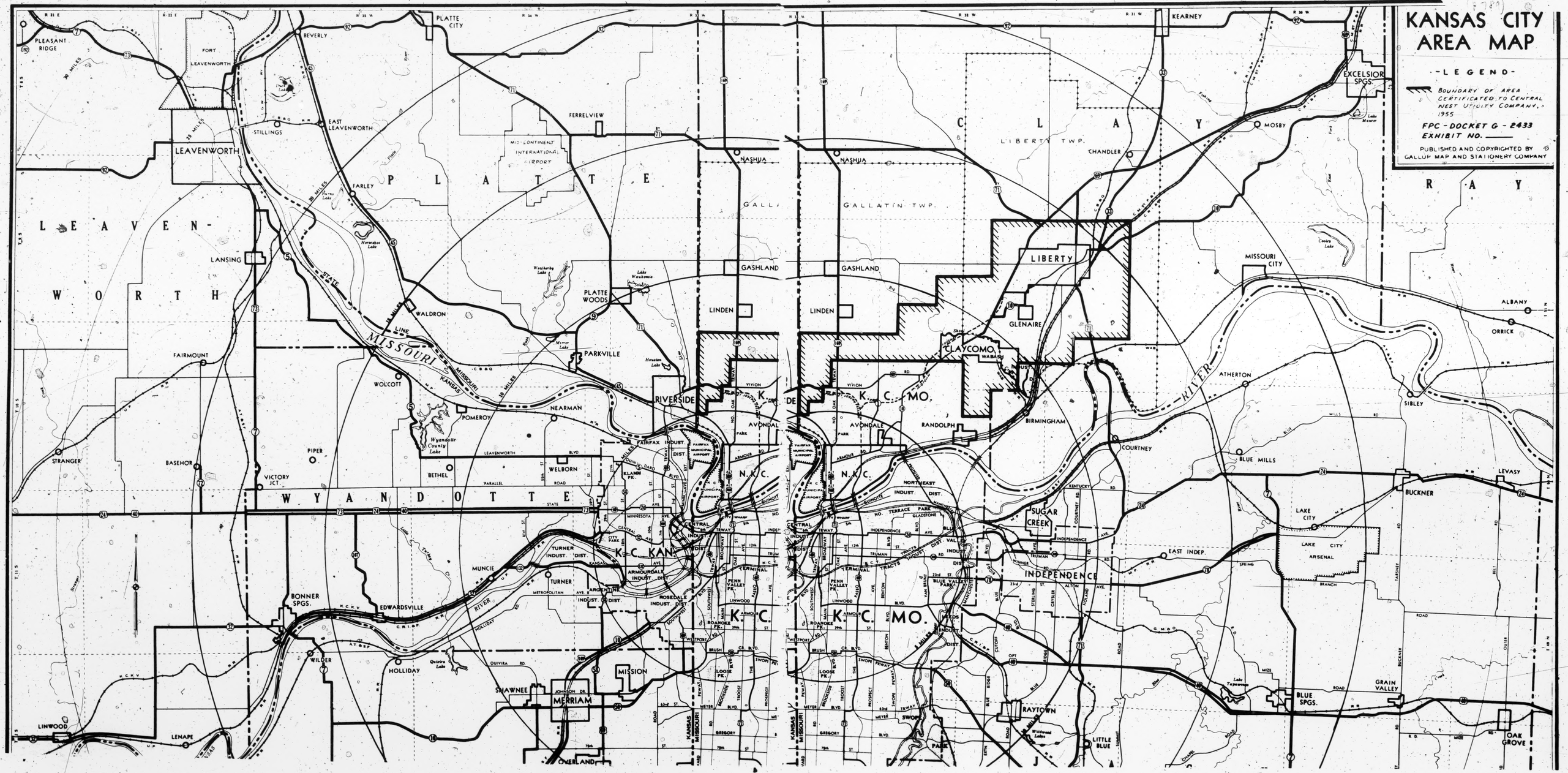
	January	February	March	April	May	June	July	August	September	October	November	December	Total
eral	32 718 250	30 209 050	30 580 050	28 299 300	26 986 850	24 812 800	25 296 150	25 632 650	25 290 400	29 888 850	29 429 200	32 730 750	341 874 300
	972 950	954 250	1 091 050	1 513 000	1 811 650	1 746 500	1 669 450	1 615 650	1 359 700	1 213 550	1 188 300	989 650	16 125 700
	1 708 200	1 578 200	1 596 800	1 503 900	1 503 900	1 429 700	1 466 800	1 466 800	1 448 300	1 578 200	1 559 600	1 726 800	18 567 200
	229 500	214 800	229 500	222 200	229 600	222 200	229 500	229 500	222 200	229 600	222 200	229 600	2 710 400
of Liberal	35 628 900	32 956 300	33 497 400	31 538 400	30 532 000	28 211 200	28 661 900	28 944 600	28 320 600	32 910 200	32 399 300	35 676 800	379 277 600
ield	104 000	97 200	104 000	100 600	103 900	100 600	103 900	103 900	100 600	103 900	100 600	104 000	1 227 200
	857 900	792 600	802 000	755 300	755 300	718 000	736 700	736 700	727 300	792 600	783 300	867 200	9 324 900
	71 600	67 000	71 600	69 300	71 600	69 300	71 500	71 500	69 300	71 600	69 300	71 600	845 200
and Field	1 033 500	956 800	977 600	925 200	930 800	887 900	912 100	912 100	897 200	968 100	953 200	1 042 800	11 397 300
	36 662 400	33 913 100	34 475 000	32 463 600	31 462 800	29 099 100	29 574 000	29 856 700	29 217 800	33 878 300	33 352 500	36 719 600	390 674 900
eral	33 937 150	30 045 400	29 945 050	28 067 600	28 558 350	26 809 100	27 752 650	27 532 650	27 724 500	29 742 950	29 783 500	34 020 350	353 919 250
	783 850	360 500	1 149 950	1 720 000	1 755 850	1 941 500	1 901 950	1 924 350	1 287 200	1 287 950	1 266 300	701 350	16 080 750
	1 798 000	1 569 000	1 607 000	1 530 000	1 569 000	1 473 000	1 530 000	1 530 000	1 569 000	1 626 000	1 588 000	1 741 000	19 130 000
	237 100	214 200	237 200	229 600	237 200	229 600	237 200	237 200	229 600	237 200	229 600	237 200	2 792 900
of Liberal	36 756 100	32 189 100	32 939 200	31 547 200	32 120 400	30 453 200	31 421 800	31 224 200	30 810 300	32 894 100	32 867 400	36 699 900	391 922 900
ield	108 700	98 100	108 700	105 200	108 700	105 100	108 600	108 600	105 100	108 700	105 100	108 700	1 279 300
	886 300	781 400	800 500	762 400	781 500	733 800	762 400	762 400	781 500	810 000	800 500	867 200	9 529 900
	73 600	66 400	73 600	71 200	73 600	71 200	73 500	73 500	71 200	73 600	71 200	73 600	866 200
and Field	1 068 600	945 900	982 800	938 800	963 800	910 100	944 500	944 500	957 800	992 300	976 800	1 049 500	11 675 400
	37 824 700	33 135 000	33 922 000	32 486 000	33 084 200	31 363 300	32 366 300	32 168 700	31 768 100	33 886 400	33 844 200	37 749 400	403 598 300

(p. 799)

FEDERAL POWER COMMISSION
Docket No. G-1202, et al
Hearing Ex. No. 135-FA
Date Identified 4/15/58
Date Admitted 4/18/58

Exhibit No.
F.P.C. Docket No. G-2433
Witness
Sheet 1 of 2

1C824

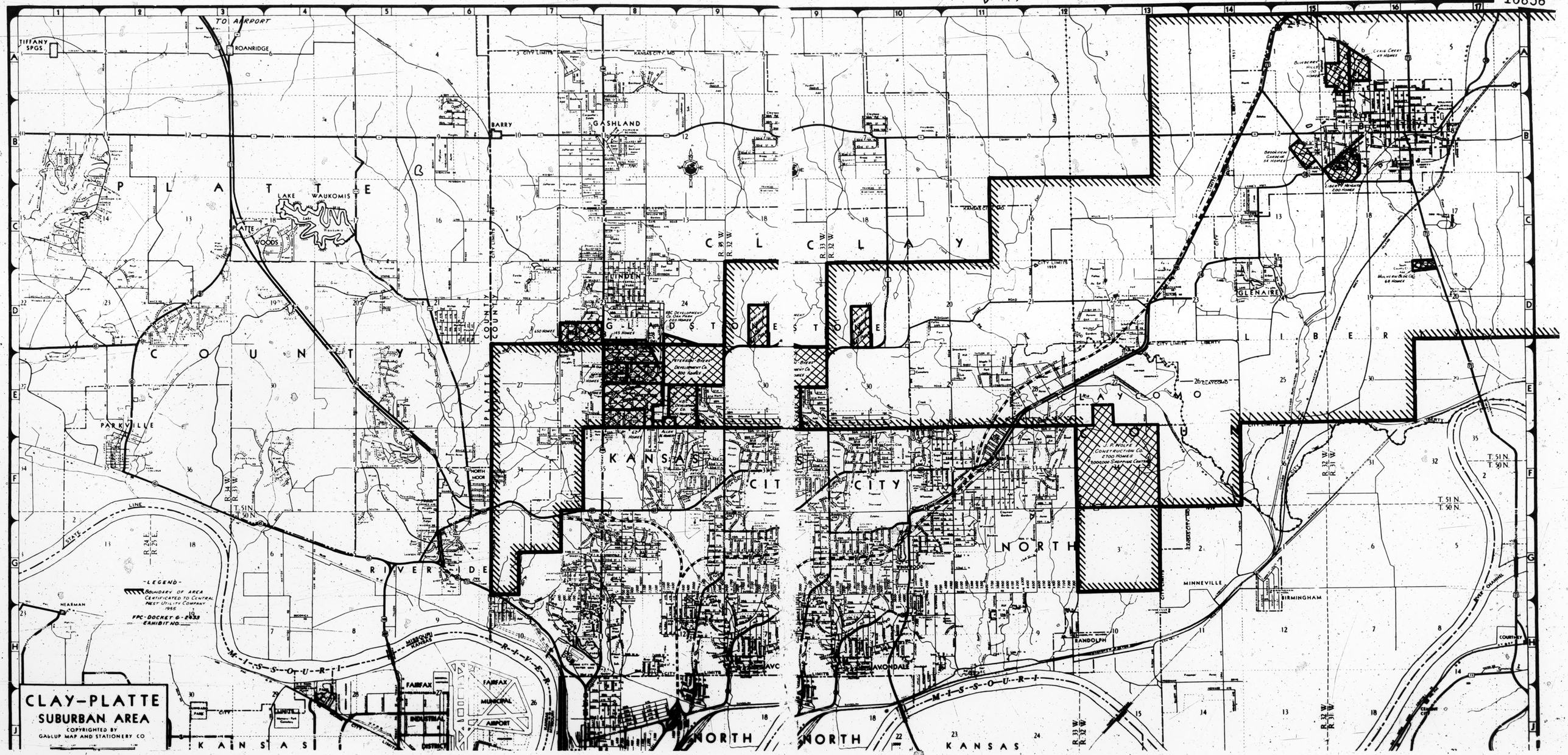

KANSAS CITY AREA MAP
-LEGEND-
BOUNDARY OF AREA CERTIFICATED TO CENTRAL NEST UTILITY COMPANY, 1955
FPC - DOCKET G - 2433
EXHIBIT NO. ____
PUBLISHED AND COPYRIGHTED BY GALLUP MAP AND STATIONERY COMPANY
LEAVENWORTH
PLATTE
CLAY
WYANDOTTE
LEAVEN-WORTH
PLEASANT RIDGE
FORT LEAVENWORTH
BEVERLY
PLATTE CITY
KEARNEY
EXCELSIOR SPGS.
STILLINGS
EAST LEAVENWORTH
FERRELVIEW
MID-CONTINENT INTERNATIONAL AIRPORT
NASHUA
LIBERTY TWP.
CHANDLER
MOSBY
FARLEY
GALLATIN TWP.
LANSING
GASHLAND
LINDEN
LIBERTY
MISSOURI CITY
PLATTE WOODS
WALDRON
GLENAIRE
ALBANY
ORRICK
PARKVILLE
CLAYCOMO
FAIRMOUNT
WOLCOTT
MISSOURI RIVER
ATHERTON
SIBLEY
RIVERSIDE
K.C. MO.
AVONDALE
RANDOLPH
BIRMINGHAM
COURTNEY
POMEROY
NEARMAN
STRANGER
BASEHOR
PIPER
BETHEL
WELBORN
N.K.C.
BLUE MILLS
LEVASY
VICTORY JCT.
SUGAR CREEK
BUCKNER
LAKE CITY
LAKE CITY ARSENAL
EAST INDEP.
INDEPENDENCE
K.C. KAN.
K.C. MO.
MUNCIE
TURNER
BONNER SPGS.
EDWARDSVILLE
WILDER
HOLLIDAY
MISSION
SHAWNEE
MERRIAM
RAYTOWN
BLUE SPGS.
GRAIN VALLEY
LINWOOD
LENAPE
OVERLAND PARK
LITTLE BLUE
OAK GROVE

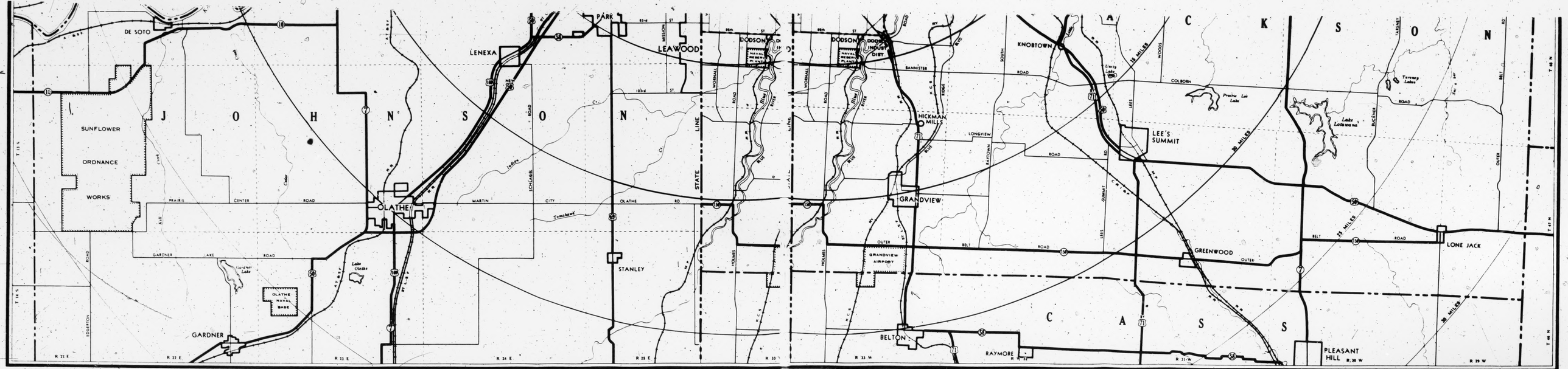
(10656)

Hearing Exhibit No. 113

Exh 113

10656





DE SOTO
PARK
LENEXA
LEAWOOD
DODSON
DODSON INDUST DIST
KNOBTOWN
J O H N S O N
SUNFLOWER
ORDNANCE
WORKS
OLATHE
STANLEY
GARDNER
OLATHE NAVAL BASE
HICKMAN MILLS
GRANDVIEW
GRANDVIEW AIRPORT
BELTON
RAYMORE
LEE'S SUMMIT
GREENWOOD
LONE JACK
PLEASANT HILL
C A S S
A C K S O N
STATE LINE
PRAIRIE CENTER ROAD
MARTIN CITY
OLATHE RD
GARDNER LAKE ROAD
BANNISTER ROAD
COLBORN ROAD
LONGVIEW ROAD
BELT ROAD
OUTER
Lake Olathe
Gardner Lake
Prairie Lee Lake
Lake Lotawana
Tarsney Lakes
Unity Lake
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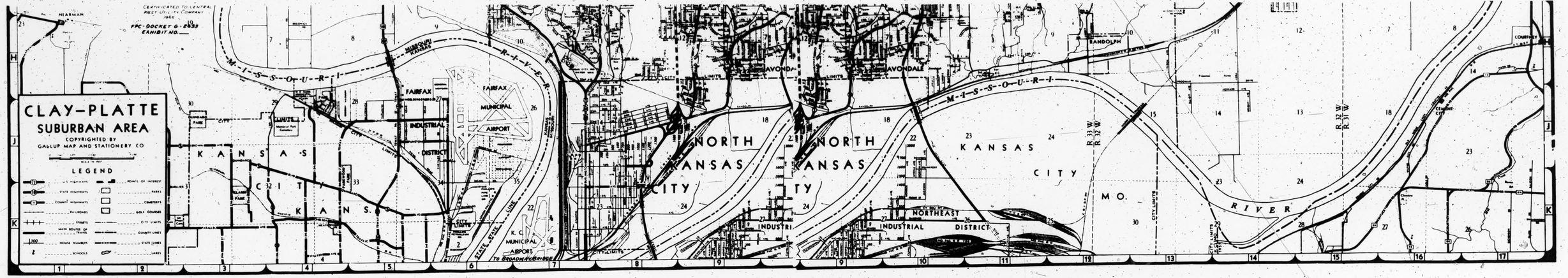
T 48 N


CLAY-PLATTE
SUBURBAN AREA
COPYRIGHTED BY
GALLUP MAP AND STATIONERY CO
LEGEND
CERTIFICATED TO CENTRAL WEST UTILITY COMPANY 1956
FPC-DOCKET G-2033
EXHIBIT NO.
NEARMAN
M-I-S-S-O-U-R-I
R-I-V-E-R
KANSAS CITY KANSAS
FAIRFAX INDUSTRIAL DISTRICT
FAIRFAX MUNICIPAL AIRPORT
K.C. MUNICIPAL AIRPORT
TO BROOKHAVEN BRIDGE
NORTH KANSAS CITY
AVONDALE
RANDOLPH
KANSAS CITY MO.
NORTHEAST INDUSTRIAL DISTRICT
COURTNEY
R 33 W
R 32 W
R 32 W
R 31 W
RIVER

PANHANDLE EASTERN PIPE LINE COMPANY

Tabulation of Estimated Monthly Deliveries and Supply
Years 1956 and 1957

M C F

	January	February	March	April	May	June	July	August	September	October	November	December	Total
1956													
Total Deliveries (As shown on Sheet 1)	36 662 400	33 913 100	34 475 000	32 463 600	31 462 800	29 099 100	29 574 000	29 856 700	29 217 800	33 878 300	33 352 500	36 719 600	390 074 900
Total Supply													
Waverly Storage Field													
In	-	-	-	1 000 000	1 000 000	1 000 000	1 000 000	1 000 000	1 000 000	-	-	-	6 000 000
Out	1 000 000	1 000 000	-	-	-	-	-	-	-	-	-	1 000 000	3 000 000
In Storage - Balance	11 000 000	10 000 000	10 000 000	11 000 000	12 000 000	13 000 000	14 000 000	15 000 000	16 000 000	16 000 000	16 000 000	15 000 000	15 000 000
Purchased and Produced from Trunkline	8 990 000	8 410 000	8 680 000	8 265 000	8 370 000	7 800 000	8 060 000	8 060 000	8 100 000	8 525 000	8 400 000	8 990 000	100 650 000
By P.E.P.L. Co.	26 672 400	24 503 100	25 795 000	25 198 600	24 092 800	22 299 100	22 514 000	22 796 700	22 117 800	25 353 300	24 952 500	26 729 600	293 024 900
1957													
Total Deliveries (As shown on Sheet 1)	37 824 700	33 135 000	33 922 000	32 486 000	33 084 200	31 363 300	32 366 300	32 168 700	31 768 100	33 886 400	33 844 200	37 749 400	403 598 300
Total Supply													
Waverly Storage Field													
In	-	-	1 000 000	1 000 000	1 000 000	1 000 000	1 000 000	1 000 000	1 000 000	-	-	-	7 000 000
Out	2 000 000	1 000 000	-	-	-	-	-	-	-	-	-	2 000 000	5 000 000
In Storage - Balance	13 000 000	12 000 000	13 000 000	14 000 000	15 000 000	16 000 000	17 000 000	18 000 000	19 000 000	19 000 000	19 000 000	17 000 000	17 000 000
Purchased and Produced from Trunkline	8 990 000	8 120 000	8 680 000	8 280 000	8 370 000	7 800 000	8 060 000	8 060 000	8 100 000	8 525 000	8 400 000	8 990 000	100 375 000
By P.E.P.L. Co.	26 834 700	24 015 000	26 242 000	25 206 000	25 714 200	24 563 300	25 306 300	25 108 700	24 668 100	25 361 400	25 444 200	26 759 400	305 223 300

Exhibit No.
Sheet 2 of 2

10825

PANHANDLE EASTERN PIPE LINE COMPANY

Tabulation of Estimated Monthly Sales, Company Use, and Deliveries
East and West of Liberal, Kansas
Years 1956 and 1957

MCF

	January	February	March	April	May	June	July	August	September	October	November	December	Total
1956													
Main Line East of Liberal													
Firm Sales	35 839 550	33 485 750	35 101 450	32 050 800	27 985 550	25 244 500	25 743 850	26 017 750	25 802 800	31 866 550	33 236 700	35 667 850	368 043 100
Interruptible Sales	1 050 450	1 024 250	1 168 550	1 438 000	1 734 150	1 671 500	1 591 950	1 538 150	1 287 200	1 291 050	1 263 300	1 067 150	15 125 700
Company Use	1 389 000	1 299 500	1 389 000	1 344 300	1 389 000	1 344 400	1 389 000	1 389 000	1 344 400	1 389 000	1 344 400	1 389 000	16 400 000
Loss	220 200	206 000	220 200	213 100	220 200	213 200	220 200	220 200	213 200	220 200	213 100	220 200	2 600 000
Total Main Line East of Liberal	38 499 200	36 015 500	37 879 200	35 046 200	31 328 900	28 473 600	28 945 000	29 165 100	28 647 600	34 766 800	36 057 500	38 344 200	403 153 800
West of Liberal and Field													
Sales	125 100	117 000	125 100	121 100	125 100	121 100	125 100	125 100	121 100	125 100	121 200	125 100	1 477 200
Company Use	592 900	554 600	592 900	573 700	592 900	573 800	592 900	592 900	573 800	592 900	573 800	592 900	7 000 000
Loss	84 700	79 200	84 700	81 900	84 700	82 000	84 700	84 700	82 000	84 700	82 000	84 700	1 000 000
Total West of Liberal and Field	802 700	750 800	802 700	776 700	802 700	776 900	802 700	802 700	776 900	802 700	777 000	802 700	9 477 200
Total Deliveries	39 301 900	36 766 300	38 681 900	35 822 900	32 131 600	29 250 500	29 747 700	29 967 800	29 424 500	35 569 500	36 834 500	39 146 900	412 646 000
1957													
Main Line East of Liberal													
Firm Sales	35 839 550	32 340 700	35 101 450	32 922 900	29 334 050	26 498 500	27 024 150	27 375 550	27 152 800	33 360 750	33 236 700	35 667 850	375 854 950
Interruptible Sales	1 050 450	979 300	1 168 550	1 438 000	1 734 150	1 671 500	1 591 950	1 538 150	1 287 200	1 291 050	1 263 300	1 067 150	15 080 750
Company Use	1 389 000	1 299 500	1 389 000	1 344 300	1 389 000	1 344 400	1 389 000	1 389 000	1 344 400	1 389 000	1 344 400	1 389 000	16 400 000
Loss	220 200	206 000	220 200	213 100	220 200	213 200	220 200	220 200	213 200	220 200	213 100	220 200	2 600 000
Total Main Line East of Liberal	38 499 200	34 825 500	37 879 200	35 918 300	32 677 400	29 727 600	30 225 300	30 522 900	29 997 600	36 261 000	36 057 500	38 344 200	410 535 700
West of Liberal and Field													
Sales	129 900	117 300	129 900	125 700	129 900	125 700	129 900	129 900	125 600	129 900	125 700	129 900	1 529 300
Company Use	592 900	554 600	592 900	573 700	592 900	573 800	592 900	592 900	573 800	592 900	573 800	592 900	7 000 000
Loss	84 700	79 200	84 700	81 900	84 700	82 000	84 700	84 700	82 000	84 700	82 000	84 700	1 000 000
Total West of Liberal and Field	807 500	751 100	807 500	781 300	807 500	781 500	807 500	807 500	781 400	807 500	781 500	807 500	9 529 300
Total Deliveries	39 306 700	35 576 600	38 686 700	36 699 600	33 484 900	30 509 100	31 032 800	31 330 400	30 779 000	37 068 500	36 839 000	39 151 700	420 465 000

FEDERAL POWER COMMISSION
Docket No. G-1104 et al.
Hearing Ex. No. 135-15
Date Identified 7/14/55
Date Admitted 10/2/55

Exhibit No.
F.P.C. Docket No. G-2433,
G-8665, et al
Witness
Page 1 of 2

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(10827)

(10827)

PANHANDLE EASTERN PIPE LINE COMPANY

Tabulation of Estimated Monthly Deliveries and Supply
Years 1956 and 1957

MCF

	January	February	March	April	May	June	July	August	September	October	November	December	Total
1956													
Total Deliveries (As shown on Sheet 1)	39 301 900	36 766 300	38 681 900	35 822 900	32 131 600	29 250 500	29 747 700	29 967 800	29 424 500	35 569 500	36 834 500	39 146 900	412 646 000
Total Supply													
Trunkline	11 005 000	10 295 000	10 695 000	10 070 000	10 075 000	9 450 000	9 765 000	9 765 000	9 750 000	10 385 000	10 350 000	11 005 000	122 [illegible] 000
P.E.P.L. Co.	28 296 900	26 471 300	27 986 900	25 752 900	22 056 600	19 800 500	19 982 700	20 202 800	19 674 500	25 184 500	26 484 500	28 141 900	290 036 000
1957													
Total Deliveries (As shown on Sheet 1)	39 306 700	35 576 600	38 686 700	36 699 600	33 484 900	30 509 100	31 032 800	31 330 400	30 779 000	37 068 500	36 839 000	39 151 700	420 465 000
Total Supply													
Trunkline	11 005 000	9 940 000	10 695 000	10 090 000	10 075 000	9 450 000	9 765 000	9 765 000	9 750 000	10 385 000	10 350 000	11 005 000	122 275 000
P.E.P.L. Co.	28 301 700	25 636 600	27 991 700	26 609 600	23 409 900	21 059 100	21 267 800	21 565 400	21 029 000	26 683 500	26 489 000	28 146 700	298 190 000

(P. 802)

Exhibit No. _____
Page 2 of 2

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Hearing Exhibit No. 140

(10844)

FEDERAL POWER COMMISSION
Docket No. G-1705, et al
Hearing Ex. No. 140
Date Identified 4/26/55
Date Admitted 4/28/55

10844

ONTARIO NATURAL GAS STORAGE & PIPELINES LIMITED

Number of days required for Panhandle to deliver Contract Volumes in Summer and Winter period if maximum daily volumes provided for in the Contract are delivered daily.

PERIOD	FIRST YEAR		SECOND YEAR		THIRD YEAR		FOURTH YEAR		FIFTH YEAR		SIXTH YEAR	
	Days to deliver	Days in which no deliveries	Days to deliver	Days in which no deliveries	Days to deliver	Days in which no deliveries	Days to deliver	Days in which no deliveries	Days to deliver	Days in which no deliveries	Days to deliver	Days in which no deliveries
Summer April 1 to Oct. 31	127	87	140	74	151	63	164	50	176	38	187	27
Winter Nov. 1 to March 31	64	87	69	82	76	75	82	69	87	64	95	56

NOTE: Contract also provides for an additional 8% reduction in volume in Summer period and 12% in Winter period but cumulative deficiencies not to exceed 10% on any November First.

(p. 803)

10845

Hearing Exhibit No. 141

LETTER AGREEMENT

and

GAS SALES CONTRACT

BETWEEN

TRANS-CANADA PIPE LINES LIMITED, ("SELLER")

AND

UNION GAS COMPANY OF CANADA, LIMITED, ("BUYER")

DATED

JANUARY 18, 1955

10846

January 18, 1955

Union Gas Company of Canada, Limited,
Gas Building,
Fifth Street,
Chatham, Ontario.

Gentlemen:

We have this day executed with you a Gas Sales Contract pursuant to which Trans-Canada Pipe Lines Limited (hereinafter referred to as "Trans-Canada") undertakes to sell to Union Gas Company of Canada, Limited (hereinafter referred to as "Union") and Union undertakes to purchase from Trans-Canada annual volumes of gas for a primary term of twenty (20) years following the date of first deliveries, an executed copy of which Contract is attached to this letter, to which copy reference is here made for a more particular description of the terms and provisions thereof and for all other purposes.

(p. 804 - blank)

This letter is to evidence our mutual understanding and agreement that Trans-Canada has executed said Contract with the Rate therein provided in its present form only upon the assumption and condition that Trans-Canada will be able to execute by March 1, 1955, with suppliers of gas in the Province of Alberta, Gas Purchase Contracts;

(a) providing for volumes of gas sufficient to supply the projected needs of Trans-Canada's system up to an aggregate average daily contract quantity of five hundred million cubic feet (500 M MCF);

(b) providing for cost of gas sold and delivered into Trans-Canada's main transmission pipe line near the Saskatchewan-Alberta border not in excess of the costs set forth in the following schedule during the times and under the conditions shown;

Periods	Cost to Trans-Canada in cents per MCF of 1000 B. T. U. Gas
Nov. 1, 1955 to Oct. 31, 1957	14.00
Nov. 1, 1957 to Oct. 31, 1958	14.29
Nov. 1, 1958 to Oct. 31, 1959	14.72
Nov. 1, 1959 to Oct. 31, 1960	15.08
Nov. 1, 1960 to Oct. 31, 1961	15.44
Nov. 1, 1961 to Oct. 31, 1962	15.64
Nov. 1, 1962 to Oct. 31, 1963	15.84
Nov. 1, 1963 to Oct. 31, 1964	16.04
Nov. 1, 1964 to Oct. 31, 1965	16.24
Nov. 1, 1965 to Oct. 31, 1966	16.44
Nov. 1, 1966 to Oct. 31, 1967	16.64
Nov. 1, 1967 to Oct. 31, 1968	16.84
Nov. 1, 1968 to Oct. 31, 1969	17.04
Nov. 1, 1969 to Oct. 31, 1970	17.24
Nov. 1, 1970 to Oct. 31, 1971	17.44
Nov. 1, 1971 to Oct. 31, 1972	17.64
Nov. 1, 1972 to Oct. 31, 1973	17.84
Nov. 1, 1973 to Oct. 31, 1974	18.04
Nov. 1, 1974 and afterward	18.24

(c) Containing no "Favored Nations" clause by virtue of which Trans-Canada would be obligated to increase the Gas Purchase Contract prices when and in the event it purchases gas from any other supplier of gas in the same general area at higher prices; and

(d) Containing no other clauses such as re-negotiation clauses, escalator clauses tied to statistical indices or other similar clauses providing for or allowing gas purchase price increases in addition to the fixed price increases set forth in the schedule set out in (b) above.

By March 1, 1955, Trans-Canada shall:

(a) Notify Union that Trans-Canada has been unable to negotiate such Gas Purchase Contracts and that Trans-Canada desires to terminate and cancel the attached Gas Sales Contract,

10848

which notice, if given, shall terminate and cancel such Gas Sales Contract, rendering the same null and void as if the parties had not this day executed same and relieving both parties of any obligations thereunder; or

(b) Notify Union that Trans-Canada has executed Gas Purchase Contract acceptable to it, whereupon this letter agreement shall terminate and the attached Gas Sales Contract shall be in full force and effect as executed and in the same manner as if this letter agreement had never been executed by the parties hereto; or

(c) Notify Union that Trans-Canada has executed Gas Purchase Contracts but that such Contracts provide for prices higher than the above prices or contain some or all of the clauses specifically referred to above, and requesting of Union a re-negotiation as hereinafter described. Union agrees, upon the receipt of such a notice and request from Trans-Canada, to attempt to re-negotiate the attached Gas

Sales Contract. In the event Trans-Canada so requests a re-negotiation with Union and the parties are unsuccessful in such re-negotiation, then either Trans-Canada or Union may, by notifying the other in writing, terminate such negotiations and cancel the attached Gas Sales Contract, rendering the same null and void as if the parties had not this day executed same and relieving both parties of any obligations thereunder.

Should Trans-Canada fail to give Union any notice as above set forth by March 1, 1955, this letter agreement shall automatically terminate and the attached Gas Sales Contract shall be in full force and effect as executed in the same manner as if this letter agreement had never been executed by the parties hereto.

The aforesaid date of March 1, 1955 may be extended by mutual agreement of the parties hereto.

10849

If the foregoing correctly sets forth our mutual understanding and agreement relating to such Gas Sales Contract, please signify your agreement hereto by executing the copy of this letter enclosed herewith in the space below provided, whereupon this letter and the executed Gas Sales Contract attached hereto shall be considered and construed together as one Agreement.

Yours very truly,

TRANS-CANADA PIPE LINES LIMITED

By (Signed) A. P. CRAIG
Vice-President

(Signed) J. C. SAKI
Assistant Secretary

(Corporate Seal)

Agreed to and accepted this 18th day of January, 1955.

UNION GAS COMPANY OF CANADA, LIMITED

By (Signed) DAVID P. ROGERS
President

(Signed) F. PALIN
Secretary

(Corporate Seal)

10850

THIS GAS SALES CONTRACT made the 18th day of January, 1955.

BETWEEN:

TRANS-CANADA PIPE LINES LIMITED
(herein sometimes called "Seller")
Of the First Part

and

UNION GAS COMPANY OF CANADA, LIMITED
(herein sometimes called "Buyer")
Of the Second Part

WHEREAS Seller is a Company incorporated for the purpose of operating as a natural gas transmission pipe line Company which proposes to construct a natural gas transmission pipe line from the Province of Alberta to Eastern Canada, to purchase natural gas in Alberta, to transmit same by means of such pipe line and to sell same to Buyer and others;

AND WHEREAS Buyer owns and operates a gas production, transmission, storage and distribution system in the Province of Ontario and desires to purchase natural gas from Seller upon the terms and conditions hereinafter set forth, both for use in its present distribution system and to expand same to other areas;

(10850)

And Whereas Buyer is a party to an agreement dated as of April 21, 1954, as amended October 26, 1954, with Panhandle

10851

Eastern Pipe Line Company (hereinafter called "Panhandle" and which Agreement is hereinafter sometimes called "Panhandle Agreement") for the purchase of natural gas from Panhandle, which is subject to termination by Buyer as therein provided:

Now Therefore This Contract Witnesseth that in reliance upon the representations hereunder and in consideration of the mutual covenants and agreements hereinafter set forth it is hereby agreed and declared between the parties hereto as follows:

Article I—Recitals and Representations

It is acknowledged, covenanted and agreed by the parties herein:

1. Seller will proceed with all due diligence to complete all steps necessary in respect of financing and of constructing and completing a natural gas transmission pipe line from the Province of Alberta to the point of delivery hereinafter specified, to obtain and to hold all permissions, permits, licenses and other similar requirements for such a project, to contract for the purchase fo sufficient natural gas to fulfil its commitments under this contract and upon and after the date of first delivery specified hereunder Seller represents its ability to deliver, supply and sell the gas herein contracted for.

2. Buyer proposes to cause a pipe line to be constructed

10852

connecting with its present system and running to the Point of Delivery specified herein in the vicinity of Sheri-

dan, Ontario, Canada, with appropriate lateral lines and connections running into various markets along the way, which proposed pipe line will be operated in conjunction with Buyer's storage fields so as to facilitate high load factors and the sale of gas to Buyer's retail and wholesale markets for high priority uses.

3. Buyer, prior to the delivery or sale in any municipality or area of any natural gas purchased from Seller, will obtain any and all necessary additional franchises, permits, consents or approvals which, by law, it is required to obtain in connection with such delivery or sale.

4. The deliveries and sales of gas contemplated herein shall not take place unless and until Seller has constructed the proposed natural gas pipe line for the transportation of natural gas from Western Canada to the Point of Delivery specified herein, subject however to Seller's overriding obligation, as provided for in Section 1 of this Article, to proceed to the full completion of such natural gas pipe line with all due diligence.

5. Inasmuch as Buyer (which term for the purposes of this Section 5 shall include, in addition to its ordinary meaning in this contract, any company which Buyer presently controls, either

directly or indirectly) will construct the pipe line of large diameter referred to in Section 2 of this Article from the vicinity of Sheridan to the Township of Dawn, to take delivery of gas from Seller and to serve municipalities presently being served by Buyer and other municipalities in proximity to such pipe line and is committing itself to purchase from Seller quantities of gas which will enable it adequately to serve such municipalities but which it is expected will be in excess of the presently estimated quan-

tities required if such municipalities are not served by Buyer, and in consideration of the covenants and agreements of Buyer contained in this contract, Seller agrees, unless otherwise directed by the Ontario Fuel Board or other appropriate governmental authority, that:

(a) in or in respect of any municipality (or part thereof as the case may be) so long as Buyer holds a franchise permitting the distribution of gas therein or distributes gas therein or has a contract with a franchise holder or distributor for the sale of gas to it for distribution or consumption therein and is willing and capable of fulfilling such franchise or contract or performing such distribution operations immediately or within a reasonable time, Seller, during the term of this contract, will neither sell or deliver nor agree to sell or deliver, other than to Buyer, any gas which will be ultimately consumed in such municipality (or part thereof as the case may be) with the

exception that should Seller have aready entered into any contract for the sale of gas to be ultimately consumed in such municipality (or part thereof as the case may be) on the date of Buyer's contract, franchise or distribution operations then nothing in this clause shall prevent Seller from making and/or continuing such sale;

(b) where on the date of these presents, or on the date on which Buyer enters into any contract or franchise or first distributes gas in any municipality (or part thereof as the case may be) in which Buyer does not have a contract or franchise or does not distribute gas on the date of these presents, Buyer's contract, franchise or distribution operations (as the case may be) within any municipality overlap territorially with any then existing distribution operations of any other gas distribution company, nothing

in this Section 5 shall preclude Seller from selling to such other gas distribution company, gas which may be ultimately consumed in such overlapped territory;

(c) in any event Seller will not, until one year before the date to be specified by Seller in the Second Notice referred to in Article II hereof or until February 1, 1956 (whichever is the later), build or supply or agree to supply natural gas to or through any pipe line constructed or to be constructed from the main transmission pipe line of Seller or of Western Pipe Lines after the date of these presents to deliver gas for consumption.

10855

in any municipality, if such pipe line would be of greater length than a similar pipe line connecting any such municipality with the afore-mentioned proposed transmission pipe line of Buyer; provided that this shall not preclude Seller from agreeing to sell and deliver to Dominion Natural Gas Company Limited gas which may be ultimately consumed in such part of any municipality in which the said company has a franchise, contract or distributes gas on the date of these presents.

6. The words "natural gas" or the word "gas" when used in this Contract or in any Exhibit hereto shall mean natural gas of the quality specified in Section II of Exhibit "B" hereto. Words, phrases or terms having special meanings in this Contract, unless specifically defined herein, have been defined in the General Terms and Conditions set out and attached hereto as Exhibit "B", hereinafter incorporated herein.

ARTICLE II—SCOPE OF CONTRACT

1. From and after the construction of Seller's pipe line facilities to the Point of Delivery hereinafter specified and

upon and after the date to be specified by Buyer as hereinafter provided for in Clause (c) of Section 1 of this Article and thereafter throughout the term of this Contract and in accordance with and subject to the terms and provisions hereof, Buyer agrees to purchase and accept from Seller, and Seller agrees to sell and

deliver to Buyer the volumes of gas hereinafter provided at the rate and on the terms and conditions herein set out.

(a) When Seller has made the financial arrangements acceptable to it and necessary for the construction and operation of the proposed pipe line transmission system required to make deliveries of gas hereunder, Seller shall forthwith notify Buyer of such event and shall also in such notice advise Buyer of the approximate date when Seller expects to be able to make first delivery to Buyer of gas hereby contracted for (which notice is hereinafter referred to as the "First Notice"). Further, on or before a date not less than 365 days prior to the date Seller expects to complete construction of its pipe line from Alberta to the Point of Delivery specified herein, Seller shall give Buyer a second notice specifying therein the date on which Seller expects to have completed said construction (which notice is hereinafter referred to as the "Second Notice"). Further, on or before a date not less than sixty (60) days prior to the date of completion of construction of Seller's pipe line from Alberta to the Point of Delivery specified herein, Seller shall give Buyer a third notice specifying therein an exact date on which Seller will have completed said construction (which notice is hereinafter referred to as the "Third Notice").

(b) In the event that Seller does not give Buyer the First Notice on or before June 1, 1957, either party shall be

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entitled at its option, upon written notice given to the other party within thirty (30) days after said date, to terminate this contract and upon such termination, the obligation of each party to the other party shall cease. In the event that Seller does give such First Notice on or before June 1, 1957, but does not give Buyer the Second Notice on or before October 1, 1958, either party shall be entitled, at its option, upon written notice given to the other party within thirty (30) days after said date, to terminate this contract and upon such termination, the obligations of each party to the other shall cease.

(c) In the event of the receipt of the First and Second Notices prior to the respective dates specified in subsection (b) hereof and of the due receipt of the Third Notice, Buyer agrees within sixty (60) days after the receipt of said Third Notice to advise Panhandle that Trans-Canada gas is available to Buyer and to terminate the agreement dated April 21, 1954, between Buyer and Panhandle as provided for in the amendment thereto dated October 26, 1954, and Seller agrees to make to Buyer, and Buyer agrees to accept from Seller (regardless of whether or not the termination above provided for has then become effective), first delivery of the gas hereby contracted for, on a day and hour not later than 365 days after the date specified by Seller in the said Third Notice, which day and hour shall be fixed by Buyer in a notice to be given Seller within one month after the due receipt by Buyer of the said Third Notice.

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(d) In the event the Panhandle Agreement has been terminated and deliveries of gas thereunder, if any, have ceased prior to the date specified in the Third Notice, then Buyer covenants that it will accept and Seller covenants

to commence, deliveries of gas hereunder by the date specified in said Third Notice.

2. The phrase "commencement of new deliveries" when used in this Section 2 and Sections 3 and 4 of this Article II, means the commencement of regular deliveries of gas to Buyer by Panhandle pursuant to the Agreement between Buyer and Panhandle dated April 21, 1954, or, in the event deliveries of gas to Buyer under such Agreement are not commenced by Panhandle, then the commencement of regular deliveries of gas to Buyer by Seller under this Contract.

In the event regular deliveries of gas to Buyer by Panhandle are commenced pursuant to such Agreement, the word "year" as used in this Section 2 and Sections 3, 4 and 7 of this Article II shall mean an annual period beginning with the date of first commencement of such regular deliveries or on any anniversary thereof.

The maximum annual volumes of gas which Buyer desires to purchase hereunder during the following periods are as follows:

During first year after commencement of new deliveries	10,500,000 MCF
During second year after commencement of new deliveries	11,500,000 MCF
During third year after commencement of new deliveries	12,500,000 MCF
During fourth year after commencement of new deliveries	13,500,000 MCF
During fifth year after commencement of new deliveries	14,500,000 MCF
During sixth year after commencement of new deliveries and each year thereafter during the term hereof	15,500,000 MCF

3. Depending upon the year in which Seller commences regular deliveries of gas hereunder, Seller shall be obli-

gated to sell and deliver to Buyer, subject to the provisions of Sections 5, 6 and 7 of this Article, the following annual volumes of gas:

During first year after commencement of new deliveries	10,500,000 MCF
During second year after commencement of new deliveries	11,500,000 MCF
During third year after commencement of new deliveries	12,500,000 MCF
During fourth year after commencement of new deliveries	13,500,000 MCF
During fifth year after commencement of new deliveries	14,500,000 MCF
During sixth year after commencement of new deliveries and each year thereafter during the term hereof	15,500,000 MCF

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In the event deliveries of gas to Buyer by Panhandle have commenced prior to the commencement of deliveries of gas to Buyer hereunder, then, in respect of the year following commencement of new deliveries in which Seller's regular deliveries of gas hereunder to Buyer actually commence, Seller's obligation shall be to deliver for the remainder of such year that portion of the total yearly volume of gas which is to be delivered in the remainder of such year in accordance with the table set forth in Section 4 of this Article II.

4. It is contemplated that, subject to the provisions of this Article II, yearly deliveries of gas shall be made to Buyer as follows:

Year	Nov. 1-Mar. 31 inc. (M. C. F.)	April 1-Oct. 31 inc. (M. C. F.)	Total Yearly Volumes
1st after commencement of new deliveries	3,500,000	7,000,000	10,500,000
2nd Do	3,800,000	7,700,000	11,500,000
3rd Do	4,200,000	8,300,000	12,500,000
4th Do	4,500,000	9,000,000	13,500,000
5th Do	4,800,000	9,700,000	14,500,000
6th and each succeeding year thereafter during the term hereof	5,200,000	10,300,000	15,500,000

Except as provided in Sections 5 and 6 of this Article, deliveries

of the volumes recited in this Section shall be made as nearly as possible at a uniform daily rate.

5. Seller shall have the right to curtail or interrupt deliveries of gas to Buyer hereunder at any time. Such curtailments or interruptions shall not, however, reduce the volumes deliverable hereunder in excess of the following:

(a) During the five (5) month period, November 1 through March 31, inclusive, in an amount not more than 12% of the total volumes deliverable in such period.

(b) During the seven (7) month period, April 1 through October 31, inclusive, in an amount of not more than 8% of the total volumes deliverable in such period.

The aforesaid reductions in the rate of delivery permissible hereunder shall not operate to create a cumulative deficiency on any November 1 in excess of 10% of the

annual volume deliverable hereunder during the preceding period of twelve months. If the day of first regular delivery hereunder is not a November first, the maximum deficiency allowable under this Section on the following November first shall be the pro rata portion of the aggregate deficiencies allowable under this Section 5 of this Article.

6. Buyer shall not be obligated to take delivery from

Seller of more than fifty five thousand (55,000) MCF of gas in any one day under this Contract.

7. Buyer shall only be obligated to take and pay for, or, if not taken, to pay for, at the rate set forth in Article V herein, 75% of the volumes of gas Seller is obligated to deliver each year under Section 3 of this Article after deducting from such volumes any deficiency in deliveries by Seller under Section 5 of this Article and any deliveries which Buyer is entitled to refuse and does refuse to accept under the provisions of paragraph 3 of Section II of Exhibit "B". Provided that in the event Deliveries of gas under the Panhandle Agreement do not commence, then the foregoing percentage shall be 50% in the first year and 75% in each year thereafter. The amount, if any, payable by Buyer in any year for gas not taken, but which Buyer is obligated to take under this Section 7, shall be added to the bill sent by Seller to Buyer for gas delivered in the last month of such year, provided that Buyer shall not be obligated to pay any amount for gas not taken pursuant to the take or pay for provisions of this Section 7 until the 20th day of the second month following such last month.

ARTICLE III—POINT OF DELIVERY

The point at which the gas is to be tendered or delivered by Seller to Buyer under this Contract shall be at the delivery point specified in Exhibit "A" attached hereto.

ARTICLE IV—DELIVERY PRESSURE

Seller shall deliver gas to Buyer as nearly as practicable at Seller's line pressure at the point of delivery specified in Exhibit "A" attached hereto, provided that said pressure shall not be less than two hundred and sixty (260) pounds per square inch gauge.

ARTICLE V—RATE

1. All gas sold and purchased hereunder shall be charged and paid for at a rate of thirty-nine (39¢) cents per MCF, subject to all adjustments as hereinafter provided for.

2. The amounts payable for gas sold and delivered hereunder will be subject to increase in an amount equal to the amount of any present or future sales tax levied by Canada, or by the Province of Ontario or any political subdivision of such Province, on the gas delivered hereunder to Buyer, if and to the extent any such sales tax shall be actually paid by Seller, either directly or indirectly, through any obligation of Seller to reimburse others, and in an amount equal to one-half of any additional tax (as additional tax is defined in the next sentence hereof) which Seller shall be required to and shall actually pay, on the gas delivered hereunder to Buyer and shall be subject to the appropriate decrease upon the repeal or reduction of any such sales tax or additional tax.

The term "additional tax" shall mean collectively any

excise tax or any tax, assessment, fee or exaction upon or related to sales, production, severance, gathering, transmission or export, hereafter levied, assessed or fixed by Canada or any Province or other validly authorized governmental authority within Canada, (not including income,

excess profits, capital stock, franchise, right of way payments, or any sales tax described in and covered by the first sentence of this Paragraph 2, or any municipal general property or real property or business taxes or any tax, charge or fee of any kind levied wholly or partly in lieu of or in reduction of any municipal general property or real property or business taxes in respect of any area or municipality where municipal general property or real property or business taxes are not levied upon Seller or are only levied upon Seller to a degree reduced by the amount of the tax, charge or fee levied in lieu thereof) in addition to or greater than those, if any, being levied, assessed or fixed at the date of this contract on, measured by, in respect of or applicable to the gas which will be delivered by Seller to Buyer under this Contract, and which Seller may be liable for and shall pay during any month either directly or indirectly through any obligation of Seller to reimburse others.

3. The monthly bill, the rate and the minimum bills provided for herein all contemplate gas deliveries hereunder which shall have an average total heating value of one thousand (1,000) British thermal units per cubic foot. In the event that

the average total heating value of the gas per cubic foot (when determined as provided in Paragraph 2 of Section III of the General Terms and Conditions incorporated herein) in any one month falls above or below one thousand (1,000) British thermal units per cubic foot, an adjustment shall be made in the total amount of the bill otherwise payable for such month. Such adjustment shall be determined by multiplying said amount so otherwise payable by a fraction, the numerator of which is the monthly arithmetical average total heating value per cubic foot of gas so determined and the denominator is one thousand. Such

adjustment shall be reflected on the bill rendered for such month and the adjusted amount shall be the amount paid by Buyer for that month. In the event that Buyer should be obligated under section 7 of Article II of this contract to pay for any gas not actually taken in any year (as the term "year" is applicable to said Section 7) the average total heating value per cubic foot of such gas shall be assumed to be the average total heating value per cubic foot of the gas actually delivered in the last month of such year.

4. The rate set forth herein shall be subject to increase from time to time and the resulting increased rate shall be subject to decrease from time to time (but only in an amount not exceeding the net amount by which such rate shall have theretofore increased under the provisions of this Section) in an amount equal to one-half of the amount of any increase or decrease as the case

may be in the cost to Seller (actually paid by Seller) per MCF of gas delivered into Seller's main transmission pipe line near the Saskatchewan-Alberta border for any gas which it actually delivers to Buyer hereunder (or which is deemed to be delivered to Buyer hereunder under the take or pay provisions of Section 7 of Article II hereof) where such increase or decrease is ordered or set by any valid law, order, rule or regulation of any legislative body or duly constituted authority now or hereafter having jurisdiction in such matter. Provided that such increase shall only take effect when and to the extent that it results in a cost to Seller for gas delivered into its main transmission pipe line as aforesaid in excess of the costs set forth in the Letter Agreement referred to in Article VI of this contract for the periods therein mentioned, (whether or not such Letter Agreement is terminated) plus, where

applicable, the quantity surcharges as set forth hereunder, namely:

Average Daily Volume in MCF Received into Seller's aforesaid Main Pipe Line System during preceding twelve-month period.	Surcharge Per MCF to be added
525,000 to 549,999	0.14 cents
550,000 to 574,999	0.28 cents
575,000 to 599,999	0.42 cents
600,000 to 624,999	0.56 cents
625,000 to 649,999	0.70 cents
650,000 to 674,999	0.84 cents

ARTICLE VI—TERM OF CONTRACT

This Contract shall become effective on the date hereof

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and shall continue in force and effect until the expiration of twenty (20) years from and after the first day of the calendar month following the date of the first regular delivery of gas hereunder (herein referred to as "primary term"), and shall then continue in effect unless or until terminated by either Buyer or Seller upon twelve (12) months' prior written notice to the other, specifying the termination date at the end of or after such primary term. It is provided, however, that this Contract shall be subject to termination or re-negotiation upon the conditions more particularly set forth in a letter Agreement between the parties hereto bearing even date herewith and executed and delivered at the same time as this Contract.

ARTICLE VII—NOTICES

Notices to Seller under this Contract shall be addressed to it at 25 Adelaide Street West, Toronto, Ontario. Notices to Buyer shall be addressed to it at Gas Building, Fifth Street, Chatham, Ontario. Either party may change its

address under this Article to any other address in Canada by written notice to the other party.

ARTICLE VIII—MISCELLANEOUS

1. As used herein and in Exhibits attached hereto and incorporated herein, the term "day" shall mean a period of twenty-four (24) consecutive hours beginning and ending at 8:00 o'clock A. M.

Eastern Standard Time, or at such other time as may hereafter be mutually agreed upon by the parties hereto.

2. For the purpose of measurement of gas delivered and sold hereunder at the Point of Delivery provided for herein, the parties agree that the average absolute atmospheric (barometric) pressure of the gas delivered and sold hereunder shall be assumed to be 14.55 pounds per square inch absolute during the term hereof, regardless of variations in actual barometric pressure from time to time.

3. Exhibits "A" and "B" and each of them and each and every term and provision of each of them are hereby declared to be and form a part of this Contract, provided however, that in the event of any conflict between the terms or conditions of this Contract and any terms or conditions of any such Exhibits, the terms and conditions of this Contract shall prevail.

4. This Contract, including all its Exhibits and each and every term of all of the same, shall be construed in accordance with the laws of the province of Ontario.

ARTICLE IX—TRANSFER AND ASSIGNMENT

Any person, company, municipality, governmental agency, or other entity which shall succeed by purchase, merger, or consolidation to the properties, substantially

as an entirety, of Seller or of Buyer, as the case may be, shall be entitled to the rights and shall be subject to the obligations of its predecessor

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in title under this Contract. Either party may, without relieving itself of its obligations under this Contract, assign any of its rights hereunder to a company with which it is affiliated, but otherwise no assignment of the Contract or any of the rights or obligations thereunder shall be made unless there first shall have been obtained the consent thereto of Buyer, in the event of an assignment by Seller, or the consent thereto of Seller, in the event of an assignment by Buyer, provided that such consent shall not be unreasonably withheld. It is agreed, however, that the restrictions on assignment contained in this Article shall not in any way prevent either party to the Contract from pledging or mortgaging its rights hereunder as security for its indebtedness.

IN WITNESS WHEREOF the Parties have hereunto set their corporate seals duly attested by the hands of their proper signing officers in that regard.

TRANS-CANADA PIPE LINES LIMITED

By (Signed) A. P. CRAIG
Vice-President

(Signed) J. C. SAKS
Assistant Secretary

(Corporate Seal)

UNION GAS COMPANY OF CANADA, LIMITED

By (Signed) DAVID P. ROGERS
President

(Signed) F. PALIN
Secretary

(Corporate Seal)

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EXHIBIT "A"

The Point of Delivery under the foregoing Gas Sales Contract is described and located as follows:

> Commencing at the most westerly angle of Lot Thirty-five (35) in the First Concession South of Dundas Street in the Township of Toronto, in the County of Peel; Thence South forty-four degrees fifty-one minutes East (S.44° 51′ E.) a distance of three thousand three hundred and twenty-eight feet (3,328′); Thence North forty degrees forty-five minutes East (N.40° 45′ E.) a distance of four hundred and seventy feet (470′) to the said Point of Delivery,

or at such other point or points as may be agreed upon between Seller and Buyer.

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EXHIBIT "B"

Attached to and incorporated in Gas Sales Contract, dated January 18, 1955, between UNION GAS COMPANY OF CANADA, LIMITED,, referred to as "Buyer" and TRANS-CANADA PIPE LINES LIMITED, referred to as "Seller".

GENERAL TERMS AND CONDITIONS

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GENERAL TERMS AND CONDITIONS

I. DEFINITIONS

Except where the context expressly states another meaning, the following terms, when used in these General Terms and Conditions, in any gas sales contracts and in any Rate Schedule into which these General Terms and Conditions are incorporated, shall be construed to have the following meanings:

1. The term "day" shall mean a period of twenty-four (24) consecutive hours, beginning and ending at a particular time to be agreed upon by Buyer and Seller.

2. The term "month" shall mean the period beginning at the time agreed upon pursuant to 1. above on the first "day" of the calendar month and ending at the same hour on the first "day" of the next succeeding calendar month.

3. The term "year" shall mean a period of 365 consecutive days beginning on the first day of the calendar month next following the date natural gas is first delivered under the gas sales contract, or on any anniversary of the first day of such calendar month; provided, however, that any such year which contains a date of February 29 shall consist of 366 consecutive days.

4. The term "cubic foot" shall mean the volume of gas which occupies one cubic foot when such gas is at a temperature of 60 degrees Fahrenheit, and at a pressure of 14.73 pounds per square inch absolute.

5. The term "MCF" shall mean 1,000 cubic feet of gas.

6. The term "British thermal unit" (B.T.U.) shall mean the amount of heat required to raise the temperature of one pound of water 1 degree Fahrenheit at 60 degrees Fahrenheit.

7. The term "total heating value", when applied to a cubic foot of gas, means the number of British thermal units produced by the combustion in a recording calorimeter at constant pressure, of the

amount of gas which, when measured on a dry basis, would occupy a volume of one cubic foot at a temperature of 60 degrees Fahrenheit, under a pressure equal to that of 30 inches of mercury at 32 degrees Fahrenheit and under standard gravitational force (acceleration 980.665 cm. per second per second) with air of the same temperature and pressure as the gas,

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when the products of combustion are cooled to the initial temperature of the gas and air, and when the water formed by combustion is condensed to the liquid state.

II. QUALITY

1. *Natural Gas:* The gas to be delivered hereunder shall be natural gas from Seller's presently contemplated or future sources of supply; provided, however, that helium, natural gasoline, butane, propane, and any other hydrocarbons except methane may be removed prior to delivery to Buyer. Further, Seller may subject, or permit the subjection of, the natural gas to compression, cooling, cleaning and other processes. The minimum total heating value of the gas delivered hereunder shall be nine hundred fifty (950) British Thermal Units per cubic foot.

2. *Freedom from objectionable matter:* The natural gas to be delivered by Seller hereunder

(a) Shall be commercialll free (at prevailing pressure and temperature in Seller's pipe line at the Point of Delivery) from dust, or other solids or liquids which might interfere with

its merchantability or cause injury to or interference with proper operation of the lines, regulators, meters or other appliances through which it flows; and

(b) Shall not contain more than one grain of hydrogen sulphide or twenty grains of total sulphur per one hundred cubic feet of gas as determined by standard methods of testing.

3. *Failure to conform to specifications against objectionable matter:* If the gas offered for delivery by Seller shall fail at any time to conform to any of the specifications set forth in paragraph 2 of this Section, then Buyer shall notify Seller of such deficiency and thereupon may at Buyer's option refuse to accept delivery pending correction by Seller. Upon Seller's failure promptly to remedy any deficiency in quality as specified in paragraph 2 of this Section, Buyer may accept delivery of such gas and may make changes necessary to bring such gas into conformity with such specifications, and Seller shall reimburse Buyer for any reasonable expense incurred by it in effecting such changes.

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III. Measurements

1. *Sales unit:* The sales unit of the gas delivered by Seller shall be a volume of one thousand (1,000) cubic feet of gas measured according to Boyle's Law for the measurement of gas under varying pressures and on the measurement basis set out in subparagraph 2 (a) below. Where appropriate, proper corrections shall be made for the specific gravity and flowing temperatures of the gas and for deviation from Boyle's La was provided in paragraph 2 below.

2. *Determination of volume and total heating value:* The volume and the total heating value of the gas delivered by Seller shall be determined as follows:

(a) *The unit of volume,* for the purpose of measurement, shall be one cubic foot of gas at a temperature of sixty (60) degrees Fahrenheit and at a pressure of 14.73 pounds per square inch absolute.

(b) *The total heating value* of the gas per cubic foot shall be determined for any month by taking the arithmetical average of the heating value as recorded each day by a standard recording calorimeter of Seller located on Seller's pipe line at or in the immediate vicinity of the Point of Delivery.

(c) *The flowing temperature* of the gas shall be determined for any day by the continuous use of a recording thermometer installed, operated and maintained by Seller at or in the immediate vicinity of the Point of Delivery. The arithmetical average of the temperature recorded each day shall be used in computing gas volumes.

(d) *The specific gravity* of the gas delivered shall be determined by the use of a recording gas gravitometer of approved type, installed, operated and maintained by Seller at or in the immediate vicinity of the Point of Delivery, which shall be checked at least once each three months by the use of an Acme type gas specific gravity balance. The arithmetical average of the specific gravity recorded each day shall be used in computing volumes of gas measured by orifice meter or meters.

(e) *The average absolute atmospheric (barometric) pressure*, for the purpose of measurement, shall be ag ed upon by the parties and shall be assumed to remain constant at

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such pressure during the term of the gas sales contract or until changed by mutual agreement, regardless of variations in actual barometric pressure from time to time.

(f) *Deviation of natural gas from Boyle's Law:* When gas is measured by means of an orifice meter or meters, the factor for correction for deviation from Boyle's Law shall be computed in accordance with the Tables and methods set forth in the California Natural Gasoline Association's Bulletins TS-402 and TS-461, using the daily arithmetical averages of temperature, pressure and specific gravity; provided, however, that when and if the American Gas Association publishes Tables for such purposes, the American Gas Association's Tables shall thereafter be used.

When gas is measured by means of positive meters, the factor for correction for deviation from Boyle's Law shall be the square of the factor determined by following the above described method for use with orifice meters.

IV. Point of Delivery

The point or points of delivery for all gas to be delivered by Seller to Buyer pursuant to any gas sales contract into which these General Terms and Conditions are incorporated shall be on the outlet side of Seller's measuring

stations located at or near the point or points of connection with Buyer's facilities or system, as specified in said gas sales contract. As herein elsewhere, and in the gas sales contract used, the term "Point of Delivery" shall include all such points of delivery specified in said gas sales contract whether there be one or more.

V. Possession of and Title to Gas

1. *Point of Delivery Controls:* As between Seller and Buyer, possession of and title to all gas delivered pursuant to any such gas sales contract shall pass from Seller to Buyer at such Point of Delivery where such gas first passes from Seller's facilities into Buyer's facilities. Until such delivery, Seller shall be deemed to be in control and possession of, and have title to, such gas; after which Buyer shall be deemed to be in control and possession thereof and have title thereto.

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2. *Responsibility:* Buyer shall have no responsibility with respect to or because of any gas deliverable under the gas sales contract until it is so delivered into the facilities of Buyer, or on account of anything which may be done, happen or arise with respect to or because of such gas before such delivery, and Seller shall have no responsibility with respect to or because of such gas after its delivery into the facilities of Buyer or on account of anything which may be done, happen or arise with respect to or because of such gas after such delivery.

3. *Indemnification:* Each party shall indemnify and save harmless the other party from any and all claims, causes of action or damage of any sort

arising out of the maintenance or operation of the property or equipment of the indemnifying party or out of its title, possession, custody or control of the gas delivered hereunder, it being the intention of the parties that the point of delivery of the gas shall be the point of division of responsibility between them.

VI. Measuring Equipment

1. *Sales measuring station:* Seller will install, maintain and operate at its own expense, at or in the immediate vicinity of the Point of Delivery, a measuring station properly equipped with a meter or meters and other necessary measuring equipment for properly measuring the gas delivered under the gas sales contract.

When orifice meters are used, such meters shall be installed and maintained, and gas volumes shall be computed, in accordance with the specifications prescribed in Regulations Respecting Gas and Gas Meters, dated April 4, 1952, and Specification No. 7 issued thereunder, effective August 1, 1952, of the Department of Trade and Commerce of Canada, Standards Division. Where not in conflict with such Regulations and Specification No. 7, the specifications prescribed in Gas Measurement Committee Report No. 2 of the American Gas Association published May 6, 1935, including the Appendix thereto and any revision thereto, shall be used in addition to and in conjunction with such Regulations and Specification No. 7. Computation of the orifice coefficients shall be made in accordance with the method prescribed in Gas Measurement Committee Report No. 2 of the American Gas Association dated May 6, 1935 and any revision thereto.

When positive meters are used, they shall be equipped with gauges for properly recording the pressure, volume and time and may be equipped with devices for integrating the product of the volume of gas measured multiplied by the pressure factor and indicating the volume of gas delivered. If an integrating device is used, corrections for the flowing temperature and deviation from Boyle's Law may be built into the device, or otherwise shall be applied to the volume of gas indicated.

2. *Check measuring equipment:* Buyer may install, maintain and operate, at its own expense, such check measuring equipment as desired, provided that such equipment shall be so installed as not to interfere with the operation of Seller's measuring equipment at or near the Point of Delivery, and shall be installed, maintained and operated in conformity with the same standards and specifications applicable to Seller's metering facilities.

3. *Rights of Parties:* The measuring equipment so installed by either party, together with any building erected by it for such equipment, shall be and remain its property. However, Seller and Buyer shall have the right to have representatives present at the time of any installing, reading, cleaning, changing, repairing, inspecting, testing, calibrating, or adjusting done in connection with the other's measuring equipment used in measuring or checking the measurement of deliveries of gas under the gas sales contract. The records from such measuring equipment shall remain the property of their owner, but upon request each will submit to the other its records and charts, together with cal-

culations therefrom, for inspection and verification, subject to return within ten days after receipt thereof.

4. *Care required:* All installations of measuring equipment applying to or affecting deliveries of gas shall be made in such manner as to permit an accurate determination of the quantity of gas delivered and ready verification of the accuracy of measurement. Care shall be exercised by both parties in the installation, maintenance and operation of pressure regulating equipment so as to prevent any inaccuracy in the determination of the volume of gas delivered under the gas sales contract.

5. *Calibration and test of meters:* The accuracy of Seller's measuring equipment shall be verified by Seller at reasonable intervals, and if requested, in the presence of

representatives of Buyer, but Seller shall not be required to verify the accuracy of such equipment more frequently than once in any thirty (30) day period. In the event either party shall notify the other that it desires a special test of any measuring equipment, the parties shall cooperate to secure a prompt verification of the accuracy of such equipment. The expense of any such special test, if called for by Buyer, shall be borne by Buyer if the measuring equipment tested is found to be in error not more than two percent (2%). If, upon test, any measuring equipment, including recording calorimeters, is found to be in error by not more than two percent (2%), previous recordings of such equipment shall be considered accurate in comput-

ing deliveries of gas, but such equipment shall be adjusted at once to record as near accuracy as possible. If, upon test, any measuring equipment shall be found to be inaccurate by an amount exceeding two percent (2%), at a recording corresponding to the average hourly rate of flow for the period since the last preceding test, when any previous recordings of such equipment shall be corrected to zero error for any period which is known definitely but in case the period is not known or agreed upon, such correction shall be for a period extending over one-half of the time elapsed since the date of the last test, not exceeding a correction period of sixteen (16) days.

6. *Correction of metering errors—failure of meters:* In the event a meter is out of service, or registering inaccurately, the volume of gas delivered shall be determined:

(a) by using the registration of any check meter or meters, if installed and accurately registering; or, in the absence of (a);

(b) by correcting the error if the percentage of error is ascertainable by calibration, tests or mathematical calculation; or in the absence of both (a) and (b), then;

(c) by estimating the quantity of delivery by deliveries during periods under similar conditions when the meter was registering accurately.

7. *Preservation of metering records:* Seller and Buyer shall each preserve for a period of at least three (3) years all test data, charts and other similar records.

VII. BILLING

1. *Monthly billing date:* Seller shall render bills on or before the 10th day of each month for all gas delivered during the preceding billing period.

2. *Right of examination:* Both Seller and Buyer shall have the right to examine at any reasonable time the books, records and charts of the other to the extent necessary to verify the accuracy of any statement, chart or computation made under or pursuant to the provisions of the gas sales contract.

VIII. PAYMENTS

1. *Monthly payment date:* Buyer shall pay Seller, at its address designated herein on or before the 20th day of each month, for the natural gas purchased by Buyer during the preceding month and billed by Seller in a statement for such month according to the measurement, computation and prices provided in the gas sales contract and exhibits.

2. *Remedies for non-payment:* Should Buyer fail to pay all of the amount of any bill as herein provided when such amount is due, interest on the unpaid portion of the bill shall accrue at the rate of eight percent (8%) per annum from the due date until the date of payment. If such failure to pay continues for thirty (30) days after payment is due, Seller, in addition to any other remedy it may have under the gas sales contract, may suspend further delivery of gas until such amount is paid; provided, however, that if Buyer in good faith shall dispute the amount of any such bill or

part thereof and shall pay to Seller such amounts as it concedes to be correct and at any time thereafter within twenty (20) days of a demand made by Seller shall furnish good and sufficient surety bond ~~satisfactory~~ to Seller, guaranteeing payment to Seller of the amount ultimately found due upon such bill after a final determination which may be reached either by agreement, arbitration decision or judgment of the courts, as may be the case, then Seller shall not be entitled to suspend further delivery of gas because of such non-payment unless and until default be made in the conditions of such bond.

3. *Adjustment of underpayment, overpayment of error in billing:* If it shall be found that at any time or times Buyer has been overcharged or undercharged in any

form whatsoever under the provisions of the gas sales contract and Buyer shall have actually paid the bills containing such overcharge or undercharge, then within thirty (30) days after the final determination thereof, Seller shall refund the amount of any such overcharge with interest thereon at the rate of five percent (5%) per annum from the time such overcharge was paid to the date of refund, and Buyer shall pay the amount of any such undercharge, but without interest. In the event an error is discovered in the amount billed in any statement rendered by Seller, such error shall be adjusted within thirty (30) days of the determination thereof provided that claim therefor shall have been made within sixty (60) days from the date of discovery of such error, but, in any event,

within twelve (12) months from the date of payment.

4. *Time of payment extended if bill delayed:* If presentation of a bill to Buyer is delayed after the 10th day of the month, then the time of payment shall be extended accordingly unless Buyer is responsible for such delay.

IX. Delivery Pressure

Seller shall deliver natural gas to Buyer at Seller's line pressure at the Point of Delivery designated in the gas sales contract, but the minimum pressure shall be as agreed upon by Buyer and Seller in the gas sales contract and shall not be less than 100 pounds per square inch gauge.

X. Warranty of Title to Gas

Seller warrants that it will at the time of delivery have good title to all gas delivered by it under the gas sales contract, free and clear of all liens, encumbrances and claims whatsoever, that it will at such time of delivery have good right and title to sell said gas as aforesaid, and that it will indemnify Buyer and save it harmless from all suits, actions, debts, accounts, damages, costs, losses and expenses arising from or out of claims of any or all persons to said gas or to royalties, taxes, license fees or charges thereon, which are applicable before the title to the gas passes to Buyer. In the event any claim of any character whatsoever is asserted against Buyer in respect of any of said gas, Buyer may retain the purchase price thereof up to the amount of such claim against it without interest until such claim has been finally determined, as security for the performance of Sellers obligations

with respect to such claims under this Section X, or until Seller shall have furnished bond to Buyer, in the amount of such claim and with sureties satisfactory to Buyer conditioned for the protection of Buyer with respect to such claim.

XI. Force Majeure

In the event of either Buyer or Seller being rendered unable, wholly or in part, by force majeure to perform or comply with any obligation or condition hereof or any gas sales contract into which these General Terms and Conditions are incorporated, upon such party giving notice and full particulars of such force majeure in writing or by telegraph to the other party as soon as possible after the occurrence of the cause relied on, then the obligations of the party giving such notice, other than obligations to make payments of money then due, so far as they are affected by such force majeure, shall be suspended during the continuance of any inability so caused but for no longer period, and such cause shall as far as possible be remedied with all reasonable dispatch. The term "force majeure" as used herein shall mean acts of God, strikes, lockouts or similar industrial disturbances, acts of the public enemy, wars, blockades, insurrections, riots, epidemics, landslides, lightning, earthquakes, fires, storms, floods, washouts, arrests and restraints of governments and people, civil disturbances, explosions, breakage or accident to machinery or lines of pipe, the necessity for making repairs to or alterations of machinery or lines of pipe, freezing of wells or lines of pipe, temporary failure of gas supply, inability to obtain materials, supplies, permits or labor, any laws, orders, rules, regulations, acts or restraints of any governmental body or authority, civil or military, any act or omission (including failure to deliver gas) of a supplier of gas to, or a transporter of gas to or for, Seller which is

excused by any event or occurrence of the character herein defined as constituting force majeure, any act or omission by parties not controlled by the party having the difficulty and any other causes, whether of the kind herein enumerated or otherwise, not within the control of the party claiming suspension and which by the exercise of due diligence such party is unable to prevent or overcome.

The settlement of strikes, lockouts or other labor disputes shall be entirely within the discretion of the party having the difficulty.

XII. Default and Termination

If either Seller or Buyer shall fail to perform any of the covenants

or obligations imposed upon it by the gas sales contract into which these General Terms and Conditions are incorporated, then in such event the other party may at its option terminate said contract by proceeding as follows: the party not in default shall cause a written notice to be served on the party in default stating specifically the cause for terminating the contract and declaring it to be the intention of the party giving the notice to terminate the same; thereupon the party in default shall have thirty (30) days after the service of the aforesaid notice in which to remedy or remove the cause or causes stated in the notice for terminating the contract, and if within said period of thirty (30) days the party in default does so remove and remedy said cause or causes and fully indemnify the party not in default for any and all consequences of such breach, then such notice shall be withdrawn and the contract shall continue in full force and effect. In case the party in default does not so remedy and remove the cause or causes or does not indemnify the party giving the notice for any and all consequences of such breach, within said period of

thirty (30) days, then, at the option of the party giving such notice, the contract shall terminate. Any cancellation of the contract pursuant to the provisions of this paragraph shall be without prejudice to the right of Seller to collect any amounts then due to it for natural gas delivered prior to the time of cancellation, and shall be without prejudice to the right of Buyer to receive any gas which it has not received but for which it has paid prior to the time of cancellation, and without waiver of any remedy to which the party not in default may be entitled for violations of the contract.

XIII. Arbitration

If and whenever any dispute shall arise between the parties to the gas sales contract, into which these General Terms and Conditions are incorporated, as to the efficiency or operation of the facilities involved or as to the quality or the measurement of the quantity of the gas from time to time delivered, or as to the computation of the volumes of gas to be delivered, or as to the pricing of any bill rendered for gas delivered, or as to any other similar matter arising in relation to the normal routine operation of the contract, the same shall be submitted for determination to a Board of three arbitrators chosen as hereunder provided. Nothing herein contained shall interfere with or limit the rights of either party to take any action it sees fit with respect to any other matter in dispute under or arising out of the said gas sales contract.

Upon written demand of either party and within ten (10) days from the date of such demand, each party shall name an arbitrator and the two arbitrators so named shall promptly thereafter choose a disinterested third party as a third arbitrator.

10883

If either party shall fail to name an arbitrator within ten (10) days from such demand, the other party shall name

the second arbitrator as well as the first, or if the two arbitrators shall fail within ten (10) days from their appointment to agree upon and appoint the third arbitrator, then upon written application by either party such third arbitrator may be appointed by the person who is at the time the Chief Justice of the Province of Ontario.

The arbitrators selected to act hereunder shall be qualified by education and training to pass upon the particular questions in dispute; for example, it is agreed that if an engineering question is involved, qualified engineers shall be appointed.

The board of arbitrators so chosen shall proceed immediately to hear and determine the question or questions in dispute. The decision of the board of arbitrators or majority thereof shall be made within forty-five (45) days after the appointment of the third arbitrator, subject to any reasonable delay due to unforeseen circumstances. In the event the board or majority thereof should fail to make a decision within sixty (60) days after the appointment of the third arbitrator, new arbitrators may at the election of either party be chosen in like manner as if none had previously been selected.

The board of arbitrators shall have power to state any question of law arising in the course of the arbitration in the form of a special case for the opinion of the Supreme Court of Ontario, but beyond this, shall have no power to state an award in whole or in part in the form of a special case for the opinion of any Court. The decision of the arbitrators shall be drawn up in writing and signed by the arbitrators or a majority of them and shall be final and binding as to the parties hereto and as to any question or questions so submitted to said arbitrators, and said parties shall abide by such decision and perform the terms and conditions thereof. Unless otherwise determined by the arbitrators, all expense in connection with such arbi-

tration, including a reasonable compensation to the arbitrators, shall be divided equally between the parties hereto, with the exception of expenses of counsel, witnesses and employees of the parties hereto, which, unless otherwise determined by the arbitrators, shall be borne by the party incurring them.

Operations under the contract into which these General Terms and Conditions are incorporated shall continue, without prejudice, during the pendency of any such arbitration.

10884

XIV. Notices

Any notice, request, demand, statement or bill provided for herein or in a gas sales contract into which these General Terms and Conditions are incorporated, or any notice which either Seller or Buyer may desire to give to the other, shall be in writing and shall be considered as duly delivered when mailed by post-paid registered mail addressed to said party at its last known post-office address, or at such other address as either party may designate in writing. Routine communications, including monthly statements and payments, shall be considered as duly delivered when mailed by either registered or ordinary mail.

XV. Modification

No modification of the terms and provisions of a gas sales contract shall be made except by the execution of written contracts.

XVI. Non-Waiver and Future Default

No waiver by either Seller or Buyer of any one or more defaults by the other in the performance of any provisions of a gas sales contract shall operate or be construed as a waiver of any future default or defaults, whether of a like or a different character.

XVII. Laws, Regulations and Orders

The Gas Sales Contract into which these General Terms and Conditions are incorporated, and rights and obligations of the parties hereunder, are subject to all present and future valid laws, orders, rules and regulations of any legislative body or duly constituted authority now or hereafter having jurisdiction and this contract shall be varied and amended to comply with or conform to any valid order or direction of any board, tribunal or administrative agency which affects any of the provisions of this contract.

10885

April 25th, 1955.

Union Gas Company of Canada, Limited,
Gas Building,
Fifth Street,
Chatham, Ontario.

Gentlemen:

Under date of January 18th, 1955 and contemporaneously with the execution of a gas sales contract between us bearing the same date (hereinafter referred to as the "gas sales contract") we executed a letter agreement between us (hereinafter referred to as the "letter agreement") which stated, inter alia, that the gas sales contract had been executed only upon the assumption that we would be able to execute by March 1st, 1955 certain gas purchase contracts and also providing that by March 1st, 1955 we should notify your Company with respect to such gas purchase contracts as therein provided, otherwise the letter agreement was to automatically terminate and the gas sales contract to be in full force and effect.

In the letter agreement it was further provided that the aforesaid date of March 1st, 1955 wherever included therein may be extended by mutual agreement of the parties thereto.

Under date of February 24th, 1955 the letter agreement was amended so that the date of March 1st, 1955 wherever it appeared in the letter agreement was extended to April 30th, 1955.

This letter is to evidence our mutual understanding and agreement that the date of April 30th, 1955 wherever it appears in

10886

the letter agreement as amended be and it is hereby extended to October 31st, 1955 and that the letter agreement as amended be further amended accordingly.

If the foregoing correctly sets forth our mutual understanding and agreement relating to such extension, please signify your agreement hereto by executing the copy of this letter enclosed herewith in the space below provided, whereupon the date of April 30th, 1955 shall wherever it appears in the letter agreement as amended be extended to October 31st, 1955.

Yours very truly,

TRANS-CANADA PIPE LINES LIMITED
By
/s/ A. P. CRAIG
Vice-President

.....
Secretary.

Agreed to and executed this
25th day of April, 1955.

UNION GAS COMPANY OF CANADA, LIMITED.

By

(signed) DAVID P. ROGERS
President

(signed) F. PALIN
Secretary

Hearing Exhibit No. 142

(10887) 10887

(p. 849)

(p. 848 is blank)

Exhibit _____

UNION GAS COMPANY OF CANADA, LIMITED

Statement of Portion of Estimated Annual Available Market for Interruptible Industrial Gas Sales

Customer	Process	Fuel to be replaced		Annual Natural gas equivalent M.C.F.
		Type	Annual Consumption	
Fibreglas of Canada, Limited	Melting glass tanks	Bunker "C" Oil	3,480,680 Imperial gallons	640,440
Dominion Glass Company, Limited	Melting glass tanks	Bunker "C" Oil	2,786,400 Imperial gallons	509,910
Polymer Corporation	Compressor fuel	Butane	209,740 M.S.C.F.	482,400
Cabot Carbon Company, Limited	Heat application in production of carbon black	Bunker "B" Oil	1,935,000 Imperial gallons	352,170
Dow Chemical Company, Limited	Processing plastics	Butane	72,000 M.S.C.F.	165,600
Greenmelk Company, Limited	Food processing	Bunker Light Oil	540,000 Imperial gallons	98,280
General Steel Wares, Limited	Heat treating	Bunker "B" Oil	246,180 Imperial gallons	44,800
Dominion Forge and Stamping Company, Limited	Forge furnaces	Bunker "B" Oil	207,040 Imperial gallons	37,680
Ontario Steel Products, Limited	Forging	Bunker "B" Oil	182,660 Imperial gallons	33,240
Proto Tool Company, Limited	Heat treating	Bunker "B" Oil	102,230 Imperial gallons	18,600
General Motors Diesel Corporation	Heat treating	Bunker "B" Oil	74,300 Imperial gallons	13,520
				2,396,640

Note:- While the above tabulation shows the estimated annual available market in certain industries for interruptible gas, provision has been made for the sale of only 1,000,000 M.C.F. of interruptible gas during each of the first 5 years of operation under the Panhandle contract of April 21, 1954.

FEDERAL POWER COMMISSION
Docket No. G-1705 et al
Hearing Ex. No. 142
Date Identified 4/27/55
Date Admitted 4/27/55

Hearing Exhibit No. 143

(10888) 0888

Exhibit _____
Schedule _____

UNITED FUEL INVESTMENTS, LIMITED
(Consolidated System)

Statement of portion of Estimated Annual Available Market for Interruptible Industrial Gas Sales.

Customer	Process	Fuel to be replaced Type	Annual Consumption	Natural Gas equivalent M.C.F.
Dominion Glass Company, Ltd.	Manufacturers of glassware	Bunker "C" oil	5,250,000 Imperial gallons	937,500
Burlington Steel Company, Ltd.	Forging	Bunker "C" oil	1,200,000 Imperial gallons	214,000
Building Products, Ltd.	Manufacturers of building materials	Bunker "C" oil	600,000 Imperial gallons	107,000
Taylor Forge & Pipe Works of Canada, Ltd.	Forging	Bunker "C" oil	1,800,000 Imperial gallons	321,000
Steel Company of Canada, Ltd.	Steel manufacturing and processing	Bunker "C" oil	30,000,000 Imperial gallons	5,357,000
				6,936,500

Conversion equivalent
5.6 gallons Bunker "C" oil = 1 M.C.F. of natural gas

Notes: 1. While the above tabulation shows the estimated annual available market in certain industries for interruptible gas, in order not to exceed the established demand only the following volumes have been given effect to in Schedules C and E.

First year	1,000,000 M.C.F.
Second year	1,250,000 M.C.F.
Third and subsequent years	1,500,000 M.C.F.

2. No provision is made herein for the market available on conversions of certain industrial processes from bituminous coal to gas for the production of steam for other than power use, such as steam processing in the soap manufacturing, rubber processing and knitting and woollen industries, or for the replacement of bituminous coal and Bunker "C" oil for burning bricks and sewer pipe.

FEDERAL POWER COMMISSION
Docket No. G-1705 et al
Hearing Ex. No. 143
Date Identified 4/27/55
Date Admitted 4/27/55

10905

Hearing Exhibit No. 150

PANHANDLE EASTERN PIPE LINE COMPANY
120 Broadway
New York 5, New York

April 25, 1955

Michigan Gas Storage Company
212 Michigan Avenue West
Jackson, Michigan

Dear Sirs:

We refer to the agreement between us dated June 23, 1954, relating to the purchase by you of an additional 60,000 Mcf of gas per day from us under the G-1 Rate Schedule of our tariff.

On May 18, 1954 we filed an application with the Federal Power Commission in Docket No. G-2433 providing for an increase in our peak day capacity of 455,000 Mcf and stated in such application that we proposed to sell an additional 60,000 Mcf of gas per day from such new facilities to you. Said agreement dated June 23, 1954 was entered following the filing of such application and contemplated the building of certain facilities by us in order to deliver the increased volumes of gas to you. Thereafter, we determined it was not feasible to proceed with the construction of a portion of the facilities in Docket No. G-2433 and that it was desirable to obtain an additional supply of gas from our subsidiary, Trunkline Gas Company. The additional gas from Trunkline, together with certain new facilities necessary in connection therewith, is the subject of our application in Docket No. G-8665 which was filed with the Commission on March 25, 1955.

You will recall that at the time we decided not to proceed with the construction of certain of our new facilities we discussed with you a reduction in our commitment to

you. However, we thereafter advised you that with the additional supply of gas from Trunkline we intended to fulfill the commitments contained in the June 23, 1954 agreement between us so that there was no need to revise such agreement. However, we stated that of the additional gas to be sold to you, 25,000 Mcf per day would be obtained from the facilities in Docket No. G-2433, while the remaining 35,000 Mcf per day would be obtained from the facilities proposed in Docket No. G-8665.

Hearings before the Commission are about to be concluded in Docket No. G-2433, while no hearings have been held as yet in Docket No. G-8665. Said agreement between us, dated June 23, 1954, providing for an additional 60,000 Mcf of gas per day, has been admitted in evidence in Docket No. G-2433 as part of Exhibit No. 81.

10906

In order that the record in Docket No. G-2433 may be clarified as to our intentions in this respect, we desire to amend the agreement between us dated June 23, 1954 so as to provide that of the 60,000 Mcf per day of the additional gas which we have agreed to sell to you, 25,000 Mcf per day shall be delivered from the additional facilities in Docket No. G-2433 and the remaining 35,000 Mcf per day shall be delivered from the next capacity available in our pipe line system.

It is anticipated that this modification will result in no delay in the delivery of the entire 60,000 Mcf per day of additional gas that we have agreed to sell to you. Rather, it is intended that this modification and a similar arrangement with one of our Limited Service Customers will make unnecessary any allocation of the additional gas supplies being provided in Docket No. G-2433, so that, upon completion by Panhandle of its case in Docket No. G-2433 (including cross-examination of its witnesses), Panhandle's application for construction of facilities and the sale of

gas therefrom may be decided without further hearings, and without prejudice to your additional gas supply.

Should the Federal Power Commission, however, undertake to hold hearings in Docket No. G-2433 for the purpose of redistributing Panhandle's capacity among its customers, this amendment shall be no longer effective and you shall revert, for the purpose of such proceedings, to the status of having an agreement for your full 60,000 Mcf per day of additional gas from the facilities in Docket No. G-2433.

If the foregoing is satisfactory to you, please indicate your acceptance thereof in the space provided below and return two signed copies of this letter to us. This shall then constitute an amendment of the agreement between us dated June 23, 1954.

Yours very truly,

PANHANDLE EASTERN PIPE LINE COMPANY

By /s/ LEITH V. WATKINS
Vice President

Accepted this 27th day
of April, 1955.

MICHIGAN GAS STORAGE COMPANY

By /s/ D. E. KARN
President

12956

Hearing Exhibit No. 185

PANHANDLE EASTERN PIPE LINE COMPANY

SUMMARY OF CONDITIONS UNDER SUMMER DESIGN CAPACITY

The attached flow diagram gives the operating conditions that will exist on an average summer day with the pro-

posed facilities added. Engine overhaul and summer flowing temperatures are reflected in the capacity.

Deliveries: (From Main Line)	MCFD
Available for Sale	1 088 100
Fuel	64 000
Leakage	6 500
Total	1 158 600

Supply:	
Into Liberal Station	858 600
Trunkline Gas Company	300 000
Total	1 158 600

7-7-55

12964

Hearing Exhibit No. 187

PANHANDLE EASTERN PIPE LINE COMPANY

FEDERAL POWER COMMISSION

Docket No. G-2433, G-8665 et al.

FLOW DIAGRAMS SHOWING WINTER PEAK DAY CAPACITY AND REFLECTING OPERATION WITH THE PROPOSED FACILITIES ADDED.

12965

PANHANDLE EASTERN PIPE LINE COMPANY

SUMMARY OF CONDITIONS UNDER WINTER PEAK DAY DESIGN CAPACITY

The attached flow diagram gives the operating conditions that will exist on a winter peak day with the proposed fa-

cilities added, and reflects the maximum capacity of the system. One engine is assumed down for overhaul at Montezuma, Zionsville and Edgerton Compressor Stations. Winter flowing temperature was used.

Deliveries: (From Main Line)	MCFD
Available for Sale	1 230 242
Fuel	48 500
Leakage	6 500
Total	1 285 242

Supply:	
Into Liberal Station	915 242
Trunkline Gas Company	370 000
Total	1 285 242

7-7-55

(1257)

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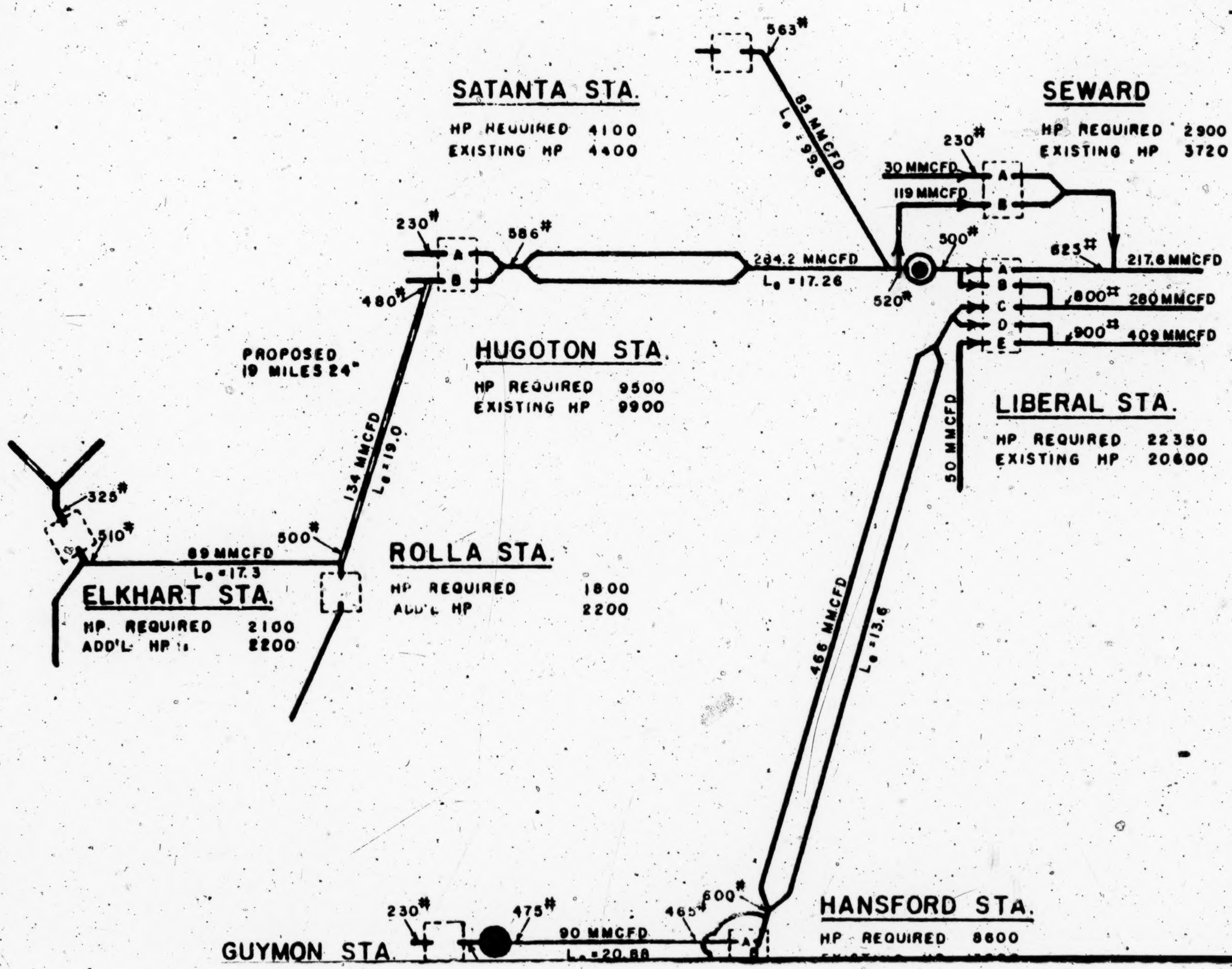
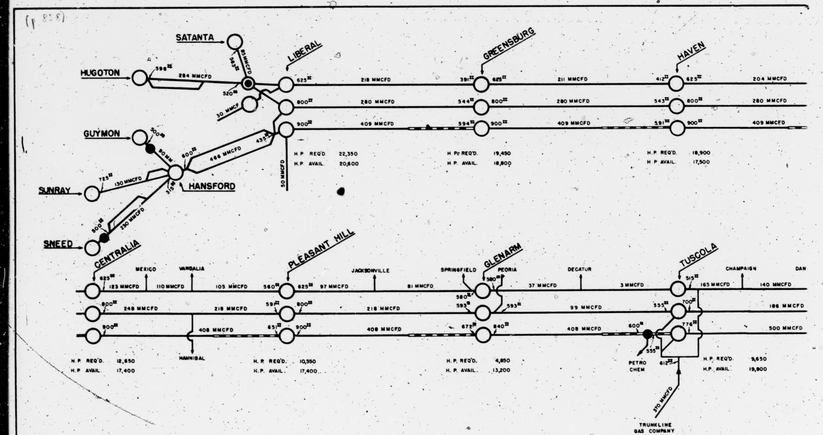
DOCKET G-1705 et al
EXHIBIT
PAGE 2 OF 3

12966




SATANTA
HUGOTON
LIBERAL
GREENSBURG
HAVEN
GUYMON
SUNRAY
HANSFORD
SNEED
CENTRALIA
PLEASANT HILL
TUSCOLA
MONTEZUMA
ZIONSVILLE
EDGERTON
FREEDOM
HOUSTONIA
CENTRALIA
LOUISBURG
OLPE
JEFFERSON CITY
COLUMBIA
MAUMEE
DETROIT
PETRO CHEM
TRUNKLINE GAS COMPANY
LEGEND
PROPOSED FACILITIES
HYDROCARBON EXTRACTION, COMPANY OWNED
HYDROCARBON EXTRACTION, NOT COMPANY OWNED
COMPRESSOR STATIONS
PANHANDLE EASTERN PIPE LINE CO.
FLOW DIAGRAM OF MAIN TRANSMISSION SYSTEM SHOWING WINTER PEAK DAY CAPACITY AND REFLECTING OPERATION WITH THE PROPOSED FACILITIES ADDED
DATE: 7-6-55
DOCKET G-1705 et al
EXHIBIT
PAGE 3 of 3
(12967)

12983

Hearing Exhibit No. 190

1955 AGREEMENTS BETWEEN
PANHANDLE EASTERN PIPE LINE COMPANY
AND ITS LARGER UTILITY CUSTOMERS

Customer

Battle Creek Gas Company
Central Illinois Light Company
Central Illinois Public Service Company
Central Indiana Gas Company
Citizens Gas and Coke Utility
East Ohio Gas Company, The
Illinois Power Company
Indiana Gas & Water Company, Inc.
Kokomo Gas and Fuel Company
Michigan Gas Storage Company
Michigan Gas Utilities Company
Missouri Power and Light Company
Northern Indiana Public Service Company
Ohio Fuel Gas Company
Ohio Gas Company
Southeastern Michigan Gas Company

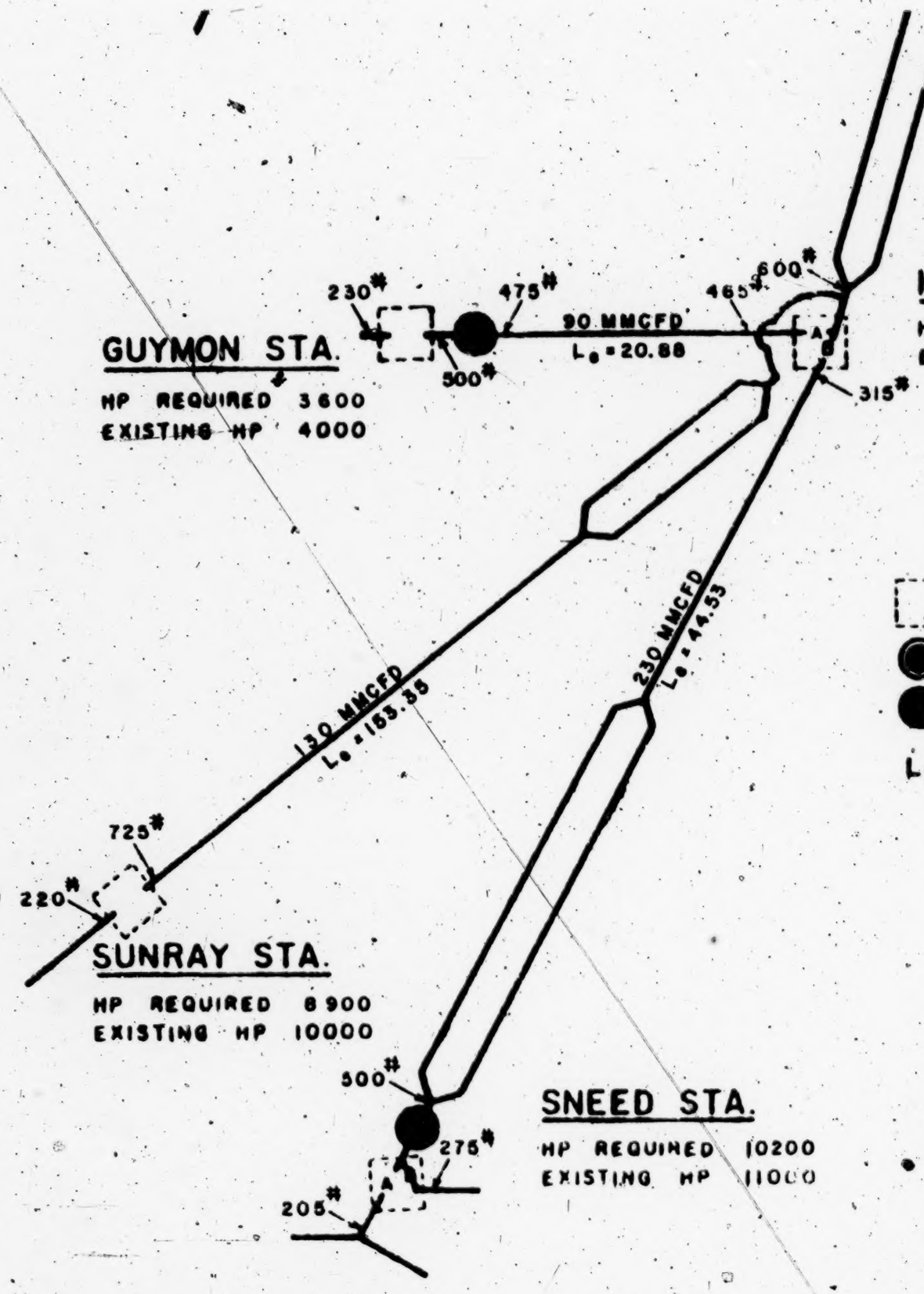
12990

ILLINOIS POWER COMPANY
134 East Main Street
Decatur, Illinois
July 1, 1955

Panhandle Eastern Pipe Line Company
120 Broadway
New York 5, New York

Dear Sirs:

We hereby agree to enter into a new service agreement with you commencing December 1, 1955 (for the unexpired



LEGEND

- COMPRESSOR STATION
- GASOLINE EXTRACTION, COMPANY OWNED
- GASOLINE EXTRACTION; NOT COMPANY OWNED
- L_e EQUIVALENT LENGTH 24" x 5/16" PIPE

PANHANDLE EASTERN PIPE LINE CO.

FLOW DIAGRAM WEST OF LIBERAL STATION SHOWING WINTER PEAK DAY CAPACITY AND REFLECTING OPERATION WITH THE PROPOSED FACILITIES ADDED.

DATE: 7-6-55

(12966)

term of the existing service agreement between us) in the form prescribed by the Federal Power Commission for the following contract demands:

Month	MCF
5 winter months	88,000
April	48,000
May	38,000
June	30,000
July	22,000
August	22,000
September	35,000
October	50,000

This agreement supersedes and cancels the agreement between us dated February 2, 1954, relating to the purchase of gas from the Waverly storage facilities.

If the foregoing is acceptable to you, please indicate your acceptance in the space provided below and return one signed copy to us.

Yours very truly

ILLINOIS POWER COMPANY

By H. G. MEENEN
Vice President

Accepted this 11th day of July, 1955.

PANHANDLE EASTERN PIPE LINE COMPANY

By F. H. ROBINSON
Vice President

12993

June 28, 1955

Panhandle Eastern Pipe Line Company
120 Broadway
New York 5, N. Y.

Dear Sirs:

We refer to the agreement between our respective Companies dated June 23, 1954, as amended April 25, 1955, contemplating the purchase and sale of an additional 60,000 Mcf of gas per day under your G-1 Rate Schedule.

You have advised us that, because of difficulties which you have encountered in the development of the Waverly Storage Project, you will not be able to supply the entire volumes of gas to be purchased and sold thereunder during the period November 1, 1955—October 31, 1956, under your G-1 Rate Schedule.

In view of these developments, we are willing to purchase part of our requirements on a firm basis under your G-1 Rate Schedule and the balance on an annual basis pursuant to your S-1 Rate Schedule for such period. Accordingly, we hereby agree to enter into two new service agreements with you, the first of which shall be for service under your G-1 Rate Schedule and shall provide for a daily contract demand of 85,000 Mcf during the five winter months, 75,000 Mcf during April and October, and 25,000 Mcf in the remaining five months; the second shall be under your S-1 Rate Schedule and shall provide for an annual contracted volume of 56,000,000 mcf.

Said agreement dated June 23, 1954 shall continue in full force and effect, except as modified herein with respect to the purchase and sale of gas for the period commencing November 1, 1955 and ending October 31, 1956. The amendment to said agreement dated April 25, 1955 is hereby cancelled.

If the foregoing is acceptable to you, please indicate your acceptance in the space provided below and return one signed copy of this letter to us.

Yours very truly,

MICHIGAN GAS STORAGE COMPANY
By D. E. HENINGSHAW
Vice President

Accepted this 29th day of June, 1955.

PANHANDLE EASTERN PIPE LINE COMPANY

By F. H. ROBINSON
Vice President

12997

July 8, 1955

Ohio Fuel Gas Company
99 North Front Street
Columbus, Ohio

Dear Sirs:

We refer to the agreement between our respective Companies dated February 8, 1954, contemplating the purchase and sale under our LS-1 Rate Schedule of 100,000 Mcf of gas per day commencing November 1, 1955.

We have advised you that, because of difficulties which we have encountered in the development of the Waverly Storage Project, we will not be able to supply the entire volumes of gas to be purchased and sold thereunder during the period November 1, 1955-October 31, 1956, under our LS-1 Rate Schedule.

In view of these developments, we proposed, as the best possible substitute arrangements under the circumstances, to sell and deliver during such limited period 70,000 Mcf

on a firm basis under our LS-1 Rate Schedule and to deliver the 100,000 Mcf of gas contemplated by the February 8, 1954 agreement as soon as we have sufficient additional capacity therefor. Accordingly, we hereby agree to enter into a new service agreement with you, which shall provide for a daily contract demand of 70,000 Mcf.

Said agreement dated February 8, 1954 shall continue in full force and effect, except as modified herein with respect to the purchase and sale of gas for the period commencing November 1, 1955 and ending October 31, 1956. The amendment to said agreement dated April 25, 1955 is hereby cancelled.

If the foregoing is acceptable to you, please indicate your acceptance in the space provided below and return one signed copy of this letter to us.

Very truly yours,

PANHANDLE EASTERN PIPE LINE COMPANY

By M. K. HAGER
Vice President

Accepted this 11th day of July, 1955.

OHIO FUEL GAS COMPANY

By P. W. ROGERS
Asst. Vice President

13345

Hearing Exhibit No. 219

PANHANDLE EASTERN PIPE LINE COMPANY
120 Broadway
New York, N. Y.

August 17, 1955

Mr. Richard C. Green
Missouri Public Service Company
Warrensburg, Missouri

Dear Mr. Green:

We are enclosing three copies of a new Service Agreement between our respective companies, dated August 17, 1955. The new service agreement which has been executed by us, provides for a contract demand of 11,000 Mcf for the five so-called Winter months, and a contract demand of 3500 Mcf for the seven so-called Summer months.

We understand the contract demand of 11,000 Mcf in the enclosed service agreement represents your Winter requirements for the first year after the completion of the construction of your North Central Project, and that your second year's Winter requirements will be approximately 14,000 Mcf. We expect to meet such second year's requirements out of storage facilities which we presently have under development. Your Company, of course, will be entitled to participate with our other utility customers, with whom we have service agreements, in future increases in our pipe line capacity.

The Contract Demands for the Summer months of 3500 Mcf have been inserted as your minimum requirements for such months. There is of course considerable difficulty in fixing such volumes at this time in view of the uncertainty as to the date your project will commence operations. However, if you desire additional gas during the Summer

months, we shall be glad to consider increases in the contract demands provided in the Service Agreement.

The enclosed Service Agreement is in our standard form as prescribed by the Federal Power Commission, and provides for service under our G-2 Rate Schedule. It is intended to cover all the cities and communities which are part of your North Central Project. The term of the agreement is 15 years. Deliveries are to be made at a point to be agreed upon between us on our main pipe line near Boonville, Missouri. The delivery pressure is 400 PSIG.

I trust that the enclosed Service Agreement will be satisfactory to you. If it is, will you please execute the same and return two executed copies of the same to us.

Yours very truly,

F. H. ROBINSON
F. H. Robinson

FHR:CI
Enc.

(p. 966 - Hare)

Hearing Exhibit No. 227

FEDERAL POWER COMMISSION

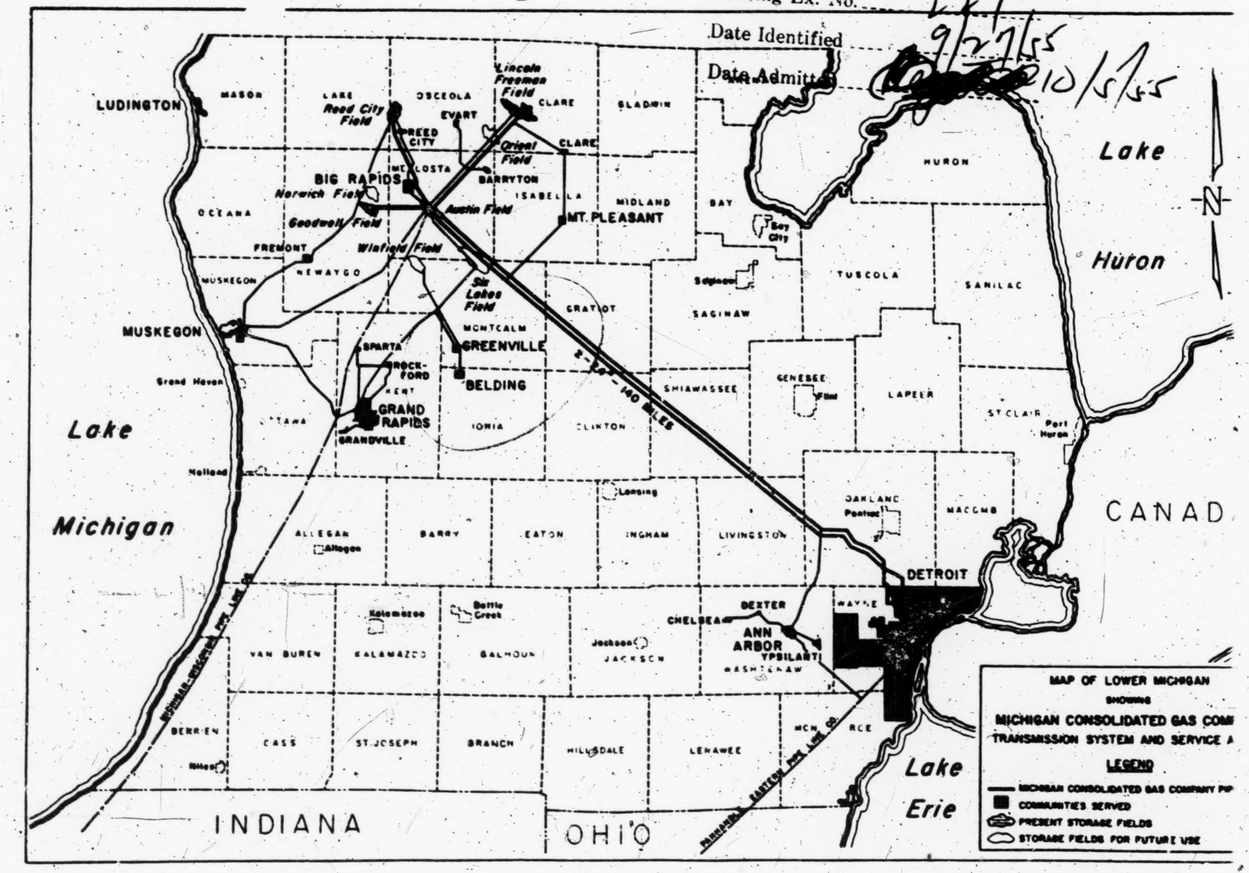
Docket No. A-1705 etal

Hearing Ex. No. 227

Date Identified 9/27/55

Date Admitted 10/5/55

(p. 867)



Hearing Exhibit No. 227

FEDERAL POWER COMMISSION

Docket No. A-1705 etal

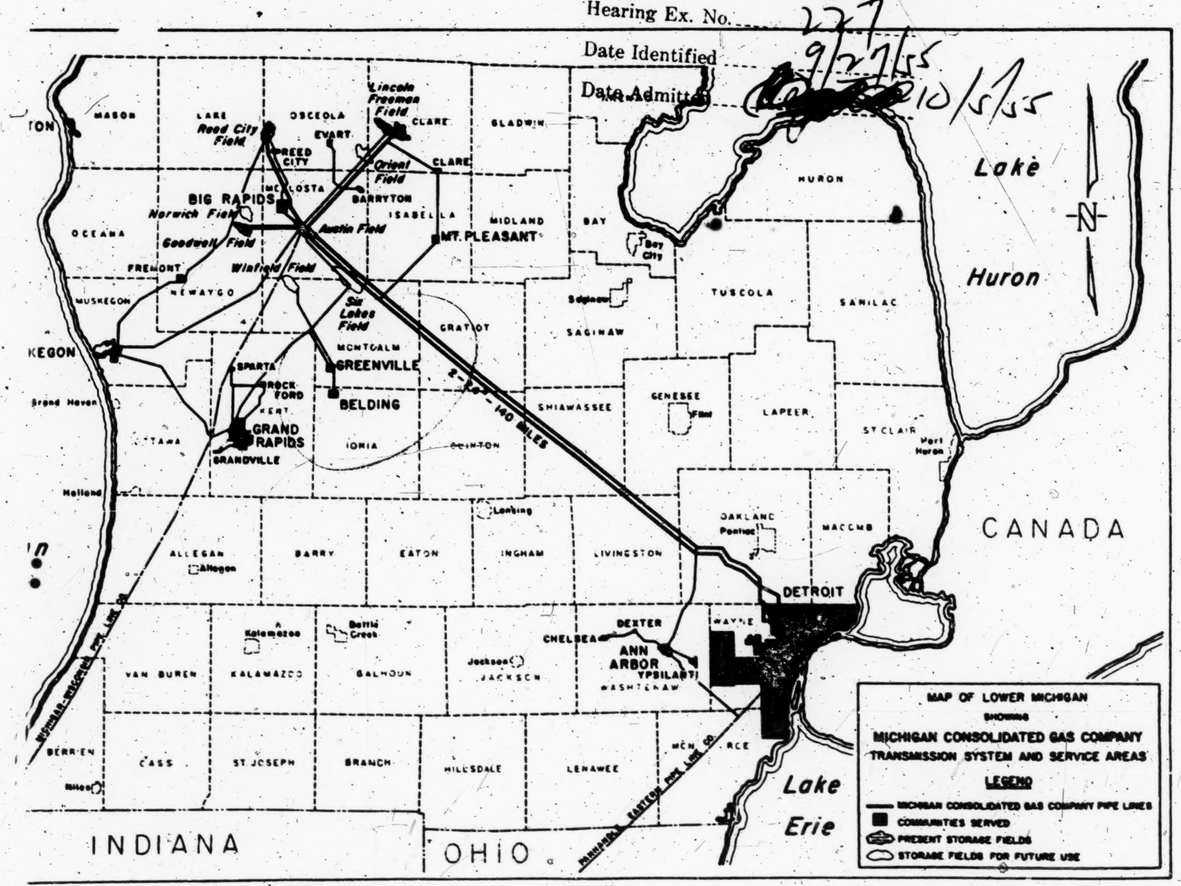
Hearing Ex. No. 227

Date Identified 9/27/55

Date Admitted 10/5/55

(p. 867)

(13376)



13378

Hearing Exhibit No. 229

MICHIGAN CONSOLIDATED GAS COMPANY

June 20, 1951.

Mr. Edward Buddrus, President,
Panhandle Eastern Pipe Line Company,
120 Broadway,
New York 5, New York.

Dear Mr. Buddrus:

In conformity with the Federal Power Commission's Opinion No. 214 and order issued June 13, 1951 in Docket No. G-1317 and related dockets, we desire to inaugurate herewith negotiations with you for the supply of additional volumes of natural gas by Panhandle Eastern Pipe Line Company to meet the further requirements of Michigan Consolidated Gas Company.

As you will recall, we stated in our petition to intervene in Docket No. G-1317 that we desired to purchase from Panhandle Eastern our pro rata share of the 300 million cubic feet per day of additional capacity involved in that matter, which would be an increase of 75 million cubic feet per day and would bring your total deliveries at Detroit to 200 million cubic feet per day. Although, because of our increased requirements, we would be glad to purchase more than this amount from you, we suggest, in view of the presently contemplated capacity of the Panhandle system, that we initiate our discussions on the basis of this amount.

Accordingly, Michigan Consolidated is ready and willing to execute the form of service agreement approved by the Commission's order to cover the purchase from Panhandle Eastern of 200 million cubic feet of natural gas per day on a firm basis at the present Detroit delivery

point and the continued purchase from Panhandle Eastern of 2 million cubic feet per day on a firm basis at the present Ann Arbor delivery point for the full term of 20 years, pursuant to Panhandle Eastern's Rate Schedule LS-1, approved by the Commission's order.

13379

In addition to the foregoing firm deliveries, Michigan Consolidated desires to purchase from Panhandle Eastern such volumes of interruptible gas, up to 100 million cubic feet per day as may be available for sale under Panhandle Eastern's I-1 Schedule, approved by the Commission's order. In this connection, we would plan, so far as practicable, to utilize such interruptible gas for storage purposes subject, of course, to our obtaining the requisite regulatory approvals.

Accordingly, Michigan Consolidated is ready and willing to execute the form of service agreement, approved by the Commission's order, to cover the purchase from Panhandle Eastern up to 100 million cubic feet of natural gas per day on an interruptible basis at the present Detroit delivery point, for the full term of 20 years, pursuant to Panhandle Eastern's Rate Schedule I-1, approved by the Commission's order.

Since the Commission has allowed the rather brief period of 30 days for negotiations and since, as we are sure you recognize, it is highly desirable that the parties arrive at an agreement in the matter, we suggest that a conference between us be arranged as soon as possible. We hold ourselves at readiness to meet your convenience in this regard and we would appreciate your early advice as to the time and place of such meeting.

Very truly yours,

MICHIGAN CONSOLIDATED GAS COMPANY

By /s/ H. TUTTLE

Executive Vice President

cc: Federal Power Commission

Michigan Public Service Commission
City of Detroit

Panhandle Eastern Pipe Line Company
Room 800 - 1221 Baltimore Avenue
Kansas City 6, Missouri

13380

Hearing Exhibit No. 230

PANHANDLE EASTERN PIPE LINE COMPANY
120 Broadway
New York 5, N. Y.

July 5, 1951

Mr. Henry Tuttle, Executive Vice President
Michigan Consolidated Gas Company
415 Clifford Street
Detroit 26, Michigan.

Dear Mr. Tuttle:

Receipt is acknowledged of your letter dated June 20, 1951 relating to the sale of gas by Panhandle Eastern Pipe Line Company to Michigan Consolidated Gas Company. Prior to receiving such letter, we filed, on June 21, with the Federal Power Commission, our application for an order permitting and approving reduction in service to your company at Detroit to 32 million Mcf per year, or 87,500 Mcf per day, on and after January 1, 1952 (Docket No. G-1725). Contemporaneously, we mailed to the Federal Power Commission (in accordance with its applicable regulations) an appropriate notice effecting a cancellation, as of December 31, 1951, of the presently effective rate schedules covering service to your company at Detroit. A copy of our letter

dated May 25, 1950 notifying your company of our termination of the contract, dated August 31, 1935, on its expiration date, December 31, 1951, in accordance with Article III thereof, was also sent to the Commission. Copies of the notice of cancellation, the application to abandon service, and our letter terminating the contract between us were duly served upon your company.

It seems rather incongruous that your company should now be seeking from Panhandle Eastern Pipe Line Company a supply of gas at Detroit in excess of 87,500 Mcf per day in view of your company's firm position in the past that your affiliated supplier, Michigan-Wisconsin Pipe Line Company, *would supply all of your requirements at Detroit* and that, under no circumstances, would Michigan Consolidated contract to purchase more than 87,500 Mcf per day from Panhandle Eastern Pipe Line Company after December 31, 1951. In this connection, your attention is called to the public statement of Mr. Fink, President of your company, made before the Common Council of Detroit on January 15, 1948, in response to questions from Councilman Charles G. Oakman that Michigan Consolidated *would not agree to purchase* from Panhandle Eastern Pipe Line Company at Detroit after December 31, 1951 an annual volume in excess of 32 million Mcf.

In view of the statements made by officials of your company in the past, and our company having been ousted from a substantial part of the Detroit market by your company and its affiliated pipe line supplier

in the proceedings before the Federal Power Commission at Docket No. G-669, you will readily understand that our company could not do otherwise than plan its operations on the basis of supplying 87,500 Mcf per day, the maximum volume which your company offered in that proceed-

ing to purchase from Panhandle at Detroit after December 31, 1951. We assumed that you planned your own operations accordingly.

In keeping with the foregoing and our application to the Federal Power Commission at Docket No. G-1725, we are willing to execute a service agreement in the form prescribed by the Federal Power Commission's order of June 13, 1951 at Docket Nos. G-1317, et al., covering deliveries of gas to you at Detroit after December 31, 1951, under the tariff filed by us July 2, 1951, at the rate of 87,500 Mcf per day and deliveries at Ann Arbor at the rate of 2,000 Mcf per day. In this connection, you are informed that if any details require discussion, representatives of this company will be very glad to take part in a conference for such purpose.

Very truly yours,

PANHANDLE EASTERN PIPE LINE COMPANY

By LEITH V. WATKINS
Secretary-Controller

13382

Hearing Exhibit No. 231

MICHIGAN CONSOLIDATED GAS COMPANY

415 Clifford Street
Detroit 26
July 11, 1951

Leith V. Watkins, Secretary-Controller
Panhandle Eastern Pipe Line Company
120 Broadway
New York, New York

Dear Sir:

We have your letter of July 5, 1951 replying to our letter of June 20, 1951 with reference to the sale of gas by Pan-

handle Eastern Pipe Line Company to Michigan Consolidated Gas Company.

You have long since been advised that we desired to continue to purchase from you on and after December 31, 1951 the full deliveries of 125,000 Mcf per day at Detroit and the full deliveries of 2,000 Mcf per day at Ann Arbor. Moreover, you have been advised since the outset of the proceedings before the Federal Power Commission in Docket No. G-1317 that we also desire to purchase from you our pro rata share of the additional gas which you expect to have available for sale.

We very much regret that you are unwilling to negotiate with us in conformity with the Federal Power Commission's Opinion No. 214 and order issued June 13, 1951 in Docket No. G-1317. As stated in our letter to you of June 20, 1951, we stand ready to meet with you at your convenience should you decide to negotiate with us.

Very truly yours,

MICHIGAN CONSOLIDATED GAS COMPANY

By /s/ HENRY TUTTLE
Henry Tuttle
Executive Vice President

13383

Hearing Exhibit No. 232

PANHANDLE EASTERN PIPE LINE COMPANY
120 Broadway
New York, N. Y.

July 13, 1951

Mr. Henry Tuttle, Executive Vice President,
Michigan Consolidated Gas Company,
415 Clifford Street,
Detroit 26, Michigan.

Dear Sir:

We acknowledge receipt of your letter of July 11 replying to our letter of July 5. We again submit to you that your company and its parent holding company, The American Natural Gas Company, consistently took the firm position from October 1946 until quite recently that all your requirements at Detroit, except for 87,500 mcf a day to be furnished by us, would be supplied by your affiliate, Michigan-Wisconsin Pipe Line Company, after December 31, 1951.

Accordingly, in making our plans for the future we made no provision for deliveries at Detroit after December 31, 1951, beyond the volume of 87,500 mcf a day.

You can readily understand that plans of an interstate pipe line company for expansion must be made years in advance and that it would not be fair to other customers to deprive them of their share of gas simply because your plans have had a recent change.

We are, of course, willing to discuss the case with you and to negotiate with you as set forth in our prior letters to you. Please be advised that I will be in my office dur-

ing the entire coming week and will be available for such negotiations.

Very truly yours,

PANHANDLE EASTERN PIPE LINE COMPANY

By LEITH V. WATKINS
Secretary-Controller

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Hearing Exhibit No. 233

MICHIGAN CONSOLIDATED GAS COMPANY

August 19, 1954.

Panhandle Eastern Pipe Line Company,
Room 2621, Equitable Building,
120 Broadway,
New York 5, New York.

Dear Sirs:

On July 28, 1954, the Federal Power Commission, by its Opinion No. 274 and accompanying order, placed in effect a modified interruptible rate schedule which established a new procedure for the sale by Panhandle Eastern Pipe Line Company of such excess gas as you have available.

As you are well aware, Michigan Consolidated Gas Company has for a number of years attempted to purchase large volumes of gas from you on an interruptible basis, but you have consistently refused to make such sales. The Commission's order of July 28, 1954, specifies that you shall offer the excess gas which you have available to those customers who are willing to contract for that gas in accordance with the procedures in the new interruptible rate schedule.

Of course, there can be no doubt as to the willingness and desire of Michigan Consolidated to enter into such a contract and we naturally assumed that you would offer your excess gas to us as required by the order of the Commission. As you know, Michigan Consolidated owns storage facilities and therefore is entitled to purchase its share of the 20 per cent of your excess gas which must be offered for storage use. We most certainly desire to purchase our share of this gas for storage purposes as well as to purchase our share of not less than half of your remaining excess gas which must be offered on a non-discriminatory basis to all of your utility customers.

We are desirous of entering into contracts for our share of this excess gas at the earliest possible date and we ask that such agreements be made available to us without further delay.

Very truly yours,

/s/ HENRY TUTTLE

HT:P.

cc: Panhandle Eastern Pipe Line Company,
1221 Baltimore Avenue,
Kansas City 6, Missouri.

Federal Power Commission,
441 G Street, N. W.,
Washington 25, D. C.

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Hearing Exhibit No. 234

STEPTOE & JOHNSON
Attorneys at Law

Clarksburg, W. Va.
Union Bank Building

Charleston, W. Va.
Kanawha Valley Building

Washington, D. C.
Shoreham Building

Washington, D. C.
August 23, 1954

Mr. Henry Tuttle, President
Michigan Consolidated Gas Company
415 Clifford Street
Detroit 26, Michigan

Dear Mr. Tuttle:

Your letter of August 19, addressed to Panhandle Eastern Pipe Line Company, has been referred to us for attention.

This is to advise that we have this day filed with the Federal Power Commission on behalf of Panhandle, application for rehearing and stay of the Commission's order issued in Docket No. G-2035 et al. on July 28, 1954.

Very truly yours,

STEPTOE AND JOHNSON

13386

Hearing Exhibit No. 235

MICHIGAN CONSOLIDATED GAS COMPANY

November 19, 1954.

Henry Tuttle
President

415 Clifford Street
Detroit 26

Panhandle Eastern Pipe Line Company,
Room 2621, Equitable Building,
120 Broadway,
New York 5, New York.

Dear Sirs:

By letter of August 19, 1954, Michigan Consolidated again informed you of its continuing desire to purchase from you excess gas which you have available and are required to offer for sale in accordance with your interruptible rate schedules as effective under orders of the Federal Power Commission. Our letter specifically pointed out that we are desirous of entering into contracts for our share of this excess gas to which we are entitled under your modified rate schedule I-1 as made effective July 28, 1954, by the Federal Power Commission's Opinion No. 274 and accompanying order issued that same day.

The only reply we have received to this communication was a letter from your counsel, Steptoe and Johnson, dated August 23, 1954, which stated:

"This is to advise that we have this day filed with the Federal Power Commission on behalf of Panhandle, application for rehearing and stay of the Commission's Order issued in Docket No. G-2035 et al. on July 28, 1954."

You were undoubtedly aware, however, that under Section 19 (c) of the Natural Gas Act, the filing of an application for rehearing "shall not, unless specifically ordered by

the Commission, operate as a stay of the Commission's order." In an order issued September 23, 1954, the Federal Power Commission scheduled an oral argument upon your application for rehearing, which related to many matters in addition to your interruptible rate schedules, but in this order the Commission did not grant your request for a stay of the order which made your new interruptible rate schedules effective. Following the oral argument, the Commission on November 9, 1954, issued an order in which it denied your application for rehearing and stated:

"* * * we find that the interruptible rate schedules ... afford a just, reasonable, and non-discriminatory basis for the disposal of Panhandle's gas available on an interruptible basis."

It is clear, therefore, that your interruptible rate schedules as modified and made effective on July 28, 1954, have been in effect since that date and you have been and still are legally obligated to deliver to us our share of your excess gas in accordance with your effective interruptible rate schedules. It is also clear that you have been obligated to deliver to us large volumes of excess gas under your interruptible rate schedules previously in effect.

Michigan Consolidated has a ready market for the sale of gas purchased from you under your interruptible rate schedules. Your failure to provide this gas in accordance with your tariff has resulted, and will continue to result, in the loss of substantial revenues to Michigan Consolidated and adversely affects the interests of our customers and the public. In the public interest, therefore, we advise you that Michigan Consolidated must and will hold you strictly accountable for your failure to carry out your obligations to it and we advise you again of our desire to purchase our

share of your excess gas under your presently effective interruptible rate schedule.

We again request that you promptly enter into a contract with us for the sale of gas under your interruptible rate schedule I-1.

Very truly yours,

/s/ HENRY TUTTLE

HT:P

cc: Panhandle Eastern Pipe Line Company,
1221 Baltimore Avenue,
Kansas City 6, Missouri.

Federal Power Commission,
441 G Street, N. W.,
Washington 25, D. C.

13388

Hearing Exhibit No. 236

PANHANDLE EASTERN PIPE LINE COMPANY
120 BROADWAY
NEW YORK, N. Y.

W. G. Maguire
Chairman

November 29, 1954

Michigan Consolidated Gas Company,
415 Clifford Street,
Detroit 26, Michigan.

Gentlemen:

This will acknowledge receipt of Mr. Tuttle's letter of November 19, 1954.

With respect to the Federal Power Commission's Order of November 9, 1954, referred to in Mr. Tuttle's letter, our

counsel are now in the process of preparing for prompt filing the necessary papers for judicial review, including an appropriate Stay Order.

We would also like to remind you that you have no contract with us for any gas service, firm or otherwise, and the question of proper volume, even of Commission-imposed firm service, is now pending before an Examiner of the Federal Power Commission for decision in Docket No. G-1725, one of the proceedings recently heard and briefed in Consolidated Docket No. G-1116 et al.

You must also know that your prior complaints with respect to interruptible gas service are the subject

13389

of another proceeding before the Federal Power Commission, namely Docket No. G-1379.

It seems hardly necessary to add that your most recent complaint; or request, falls far short of the necessary procedure prescribed by the Commission in its Order which will soon be the subject of judicial review.

Very truly yours,

W. G. MAGUIRE
Chrm.

WGM/ejs

MICHIGAN CONSOLIDATED GAS COMPANY

TABULATION SHOWING CERTAIN ADDITIONAL INTERRUPTIBLE SALES AVAILABLE TO MICHIGAN CONSOLIDATED GAS COMPANY,

Name of Customer	Address	1954 Use in Tons	Present Fuel Cost Delivered Cost Per Ton	Cost/MCF 1000 BTU Eq.	Annual Consumption MCF
Detroit District					
1. Amer. Agricultural Chem.	204 So. Forman	10,000	$8.95	34.4¢	260,000
2. Amer. Brass Co.	174 So. Clark	12,000	8.65	33.3¢	312,000
3. Budd Co.	12141 Charlevoix	40,000	9.60	36.9¢	1,040,000
4. Cadillac Motor Car Co.	2860 Clark	50,000	8.06	31.0¢	1,300,000
5. Chrysler Corp.	12229 E. Jefferson	56,000	8.68	33.4¢	1,456,000
6. Chrysler Corp.	11631 Mack	57,000	8.68	33.4¢	1,482,000
7. Chrysler Corp.	6450 E. Eight Mile	43,500	8.68	33.4¢	1,131,000
8. Det. City Bd. of Water Commissioners	8300 W. Warren	38,300	8.40	32.3¢	996,000
9. Detroit Steel Corp.	1025 So. Oakwood	3,500	9.40	36.2¢	91,000
10. Fairmount Foods, Inc.	608 E. Milwaukee	1,000	8.75	33.7¢	26,000
11. Herman Kiefer Hospital	Hamilton & Taylor	6,000	10.00	38.5¢	156,000
12. Hudson Motor Div.-AMC	12601 E. Jefferson	30,000	9.75	37.5¢	780,000
13. Infant Diaper Service	4620 - 15th St.	650	11.75	45.2¢	17,000
14. Kelsey Hayes Wheel Co.	6100 McGraw	27,547	9.355	36.0¢	716,000
15. Kelsey Hayes Wheel Co.	3600 Military	15,422	8.50	32.7¢	401,000
16. Motor Products Corp.	11801 Mack	12,000	8.76	33.7¢	312,000
17. Mt. Carmel Hospital	6071 W. Outer Dr.	3,500	9.75	37.5¢	91,000
18. Nash-Kelvinator Div.-AMC	14250 Plymouth	10,545	9.20	35.4¢	274,000
19. Packard Motor Div.-Studebaker-Packard Corp.	1580 E. Grand Blvd.	50,000	8.35	32.1¢	1,300,000
20. Parke, Davis & Co.	Jos. Campau at River	33,000	9.00	34.6¢	858,000
21. Penn-Michigan Co.	2730 Scotten	3,750	9.25	35.6¢	98,000
22. Scott Paper Co.	9125 W. Jefferson	80,000	8.08	31.1¢	2,080,000
23. Scotten-Dillon Co.	4085 W. Fort	3,000	9.10	35.0¢	78,000
24. Ternstedt Mfg. Co.-GMC	6307 W. Fort	44,000	7.75	29.8¢	1,144,000
25. U.S. Rubber Co.	6600 E. Jefferson	170,713	8.75	33.7¢	4,439,000
				TOTAL	20,838,000

13391

Hearing Exhibit No. 238

EXCERPTS FROM TESTIMONY OF M. K. HAGER ON DECEMBER 17, 1952

In the Matter of

PANHANDLE EASTERN PIPE LINE COMPANY

Docket Nos. G-1767 et al.

(p. 141)

Mr. Miller: Our next witness is Mr. Hager.

Thereupon

M. K. Hager

was called as a witness and, having been previously duly sworn, was examined and testified as follows:

Direct Examination

By Mr. Miller:

Q. Please state your full name and address, Mr. Hager. A. My name is M. K. Hager.

Q. Where do you live? A. My residence is 6022 Belleview, Kansas City, Missouri.

Q. What is your present position with Panhandle Eastern Pipe Line Company? A. I am assistant to the president.

Q. What are your principal duties in that position, Mr. Hager? A. My principal duties go to exercising general supervision of the operation of the main transmission system of Panhandle Eastern Pipe Line Company.

Q. How long have you been with Panhandle Eastern Pipe Line Company?

13392

A. I have been with Panhandle Eastern and a company which it acquired, which was formerly Michigan Gas Trans-

mission Corporation, since the year 1937, with the exception of slightly more than three years when I was on leave with the War Production Board.

Q. With that experience and in your present position and capacity, are you thoroughly familiar with the pertinent facts relating to the capacity of Panhandle Eastern Pipe Line Company's system to deliver gas to its customers? A. Yes, I would say so. My duties require that I maintain a close working knowledge of load distribution, capacity features of the system to deliver gas to the customers, especially during the winter months.

* * * * *

(p. 146)

Q. What other prospects, if any, does Panhandle have for increasing its peak day capacity? A. Well, like any other well managed business, forward looking, Panhandle, in looking at increasing its deliverability and supply for future increases in business, has a number of things in prospect.

As many people know, we, that is, Panhandle, owns and controls the Howell Gas Field, located near Howell, Michigan. This field has a present deliverability of ten million cubic feet per day, which can be made available to the main-line system with the

13393

installation of some compressor facilities and the placing of this reservoir on storage operation.

The field can be developed to produce at least twenty-five million cubic feet per day during peak periods.

In addition to that, we have found, within the past year, new gas fields east of the Howell Field in Michigan. We have ample geological evidence that other such fields exist in that area.

One of the discovery wells in one of these fields has an open flow of fifteen million cubic feet per day.

Also, we are cooperating with one of our largest utility customers in the State of Illinois in testing a dome near the Town of Waverly, Illinois, which is within four miles of our main pipeline system. That dome has one structure about eleven hundred feet deep, to which some wells have been drilled, and we know that that formation can be developed for storage purposes.

A test well is now being drilled to determine the characteristics of deeper formations which are similar to or about the same as the structures in which Natural Gas Storage Company of America is developing a major storage project near Kankakee, Illinois.

The geologists' reports that we have show that these structures at Waverly may be developed economically to produce fifty to one hundred million cubic feet of gas per day on peak days.

So, from these, it can be seen that Panhandle is going ahead planning to amplify its deliverability as the increases in business justify.

Hearing Exhibit No. 239

(13394)

(p.886A)

HOWELL GAS FIELD

LIVINGSTON COUNTY, MICHIGAN

R-4-E

R-5-E

T 3 N

T 2 N

CITY OF HOWELL

HOWELL TWP

MARION TWP

OCEOLA TWP

GENOA TWP

FAULT UP DOWN

-3050

-3000

-2950

-2900

969 -3029

14896 1 -2975

13877 -2971

877 -2953 10

937 -2906

931 -2921

972 -2970 5

1002 -3008 8

935 -2913 13

932 -2905 11

971 -2978 14

1001 -3013 8

1040 -2894 10

933 -2962 7

974 -3003 6

934 -2930 9

936 -2995 6

18974 -3134

965 -3012 7

FEDERAL POWER COMMISSION

Docket No. G-1705 et al

Hearing Ex. No. 239

Date Identified 9/27/55

Date Admitted 10/4/55

KEY TO SYMBOLS	EXPLANATORY EXAMPLE	CONTOUR ON TOP OF PAY
✲ GAS WELL ✱ GAS WELL ABANDONED ✲ DRY-SHOW OF GAS ◇ DRY HOLE	932 — PSC OR CD NO ✲ -2905 — TOP OF PAY 11 — FEET OF PAY	PROBABLE OUTLINE OF PAY STORAGE AREA OUTLINE

MICHIGAN CONSOLIDATED GAS COMPANY
PRODUCTION AND PIPE LINE DISTRICT
DRAWN BY - V.A. DATE 12-21-54

0 1/2 1 MILE
SCALE

13413

Hearing Exhibit No. 244

PANHANDLE EASTERN PIPE LINE COMPANY
120 BROADWAY
NEW YORK, N. Y.

September 8, 1955

Michigan Consolidated Gas Company
415 Clifford Street
Detroit 26, Michigan

Dear Sirs:

We received from you today the Petition of Michigan Consolidated Gas Company, executed September 7, 1955, in connection with Federal Power Commission Docket No. G-9189, in which you offer to purchase gas from Panhandle under Panhandle's Storage Rate Schedule S-1.

Your offer is stated as follows:

> "Michigan Consolidated is willing to purchase the above portion of the excess gas upon the same terms and conditions as Panhandle proposed to deliver and sell such excess gas to East Ohio. If Michigan Consolidated receives its share, namely, 3,570,000 Mcf, of the excess gas, Michigan Consolidated will be in a position to add 21,000 space heating customers this year."

Panhandle Eastern Pipe Line Company hereby accepts your offer to purchase gas upon the same terms and conditions as Panhandle proposes to deliver and sell gas to East Ohio. The terms and conditions of such sale, as you correctly stated in the document above referred to, are that the volumes of gas shall be delivered under Panhandle's S-1 Rate Schedule during the period September 1, 1955 to December 1, 1955.

With respect to volumes, you have offered to purchase 3,570,000 Mcf in order that

you will be able to add 21,000 space heating customers this year. As stated above, we have accepted this offer and we tender herewith the executed original and two additional copies of the service agreement applicable to the S-1 Rate Schedule. Will you please execute the original and one copy and return them to us.

Although your offer is stated in terms of 3,570,000 Mcf, other language in the document referred to above indicates that you may have offered also to purchase a total of 6,000,000 Mcf, rather than only 3,570,000 Mcf of gas under Panhandle's S-1, Rate Schedule during the period September 1, 1955 until December 1, 1955. We are also prepared to accept that offer and accordingly, we tender herewith an executed original and two additional copies of the service agreement applicable to the S-1 Rate Schedule, for the total amount of 6,000,000 Mcf. In the event that this latter offer is the one which you would prefer, will you please sign the service agreement for the larger volume and return the service agreements relating to the lesser volume.

Accepting your offer, we do not, of course, agree or concede that Michigan Consolidated Gas Company is a "Buyer" as that term is used in Panhandle's tariff, or that Panhandle is under any obligation whatever to accept such offer or to tender volumes of gas to you under any of Panhandle's rate schedules.

The Contract between Panhandle and Michigan Consolidated terminated by its terms on December 31, 1951. Since that time, we have been delivering gas to you on a firm basis in the amount of 127,000 Mcf per day under the compulsion of orders issued by the Federal Power Commission. Accordingly, our acceptance of your offer to purchase storage

gas, as stated above, is made without prejudice to our position in Federal Power Commission Docket No. G-1725 and litigation relating thereto.

13415

Inasmuch as your offer and our acceptance thereof relates only to gas to be delivered between September 1, 1955 and December 1, 1955, as in the case of East Ohio, it will be necessary for us to proceed most expeditiously to obtain necessary regulatory approval as was done in the case of East Ohio.

In addition, we must file revisions in the S-1 Rate Schedule presently on file with the Commission. We are presently preparing the necessary documents which will be filed with the Commission just as soon as we receive from you the executed copy of the appropriate service agreement, which, of course, is necessary to complete the filings with the Federal Power Commission.

Will you please cooperate with us both in returning to us at the earliest possible time the signed service agreement and also in the prosecution of the proposed proceeding before the Federal Power Commission.

Very truly yours,

PANHANDLE EASTERN PIPE LINE COMPANY

By /s/ LEITH V. WATKINS
Vice-President and Secretary

Item LL by Reference
(Excerpt)

FOOTNOTES

1/ City of Indianapolis, Indiana.

2/ A portion of the total gas supply is delivered by the main line of Panhandle and a portion by the Louisburg Lateral.

3/ An incomplete response or no response was received. Quantities shown are estimates based upon sales by Panhandle on the system peak days, Winter 1952-1953, and Winter 1953-1954 to March 1, 1954. Estimates for the Winter 1954-1955 are the contract demands of the customers.

NOTES

(A) The sources of data for the quantities of gas shown above are the responses to the letters of the Commission to the customers of Panhandle, dated November 9, 1953 and March 5, 1954, in Dockets Nos. G-1116, et al, or estimates where an incomplete response or no response has been received by the Commission.

(B) Quantities of gas shown for Limited Service customers and for Citizens Gas and Coke Utility (City of Indianapolis, Indiana) reflect dependence on Panhandle for only part of the peak day requirements. For the balance of the customers, responding in full to the Commission's questionnaires, the quantities shown reflect sales of gas supplied by Panhandle or sales which would be made if Panhandle supplies additional volumes of gas. In some instances utilization of stand-by facilities or curtailments will reduce the required quantities.

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(p. 891 - Part 1)

PANHANDLE EASTERN PIPE LINE COMPANY
Dockets Nos. G-1116, et al.

WINTER PEAK DAY REQUIREMENTS OF RESALE CUSTOMERS
Years 1952-1955
(Continued)

Service, Zone and State	Winter Contract Demand	WINTER 1952-1953 Actual Peak Day			WINTER 1952-1953 Peak Day - Adjusted to 0° F.			WINTER 1953-1954 Estimated Peak Day - 0° F.			WINTER 1953-1954 Actual Peak Day			WINTER 1953-1954 Actual Peak Day-Adj. to 0° F.			WINTER 1954-1955 Estimated Peak Day - 0° F.		
		Firm Sales	Send-Out	Requirements	Firm Sales	Send-Out	Requirements	Firm Sales	Send-Out	Requirements	Firm Sales	Send-Out	Requirements	Firm Sales	Send-Out	Requirements	Firm Sales	Send-Out	Requirements
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
								MCF 14.73 PSIA											
SMALL GENERAL SERVICE																			
Eastern Zone																			
Indiana																			
Indiana Gas Distribution Corp.	1,100	666	666	666	815	815	815	845	845	845	767	767	767	900	900	900	910	910	910
Lapel, Town of	600	468	468	468	667	667	667	711	711	711	686	686	686	764	764	764	730	730	730
Montezuma, Town of	600	489	489	489	489	489	489	800	800	800	590	590	590	522	522	522	1,000	1,000	1,000
Pendleton Natural Gas Co.	1,600	846	900	900	1,078	1,147	1,147	1,241	1,319	1,319	1,154	1,229	1,229	1,271	1,353	1,353	1,426	1,516	1,516
Pittsboro, Town of	350	258	258	258	258	258	258	265	265	265	289	289	289	296	296	296	275	275	275
Roachdale, Town of 2/	500	187	187	187	338	338	338	459	459	459	360	360	360	459	459	459	500	500	500
	4,750	2,914	2,968	2,968	3,645	3,714	3,714	4,321	4,399	4,399	3,846	3,921	3,921	4,212	4,294	4,294	4,941	4,931	4,931
Ohio																			
Central States Natural Gas Co.	1,500	1,170	1,200	1,200	1,368	1,398	1,398	1,450	1,500	1,500	1,434	1,522	1,522	1,592	1,680	1,680	1,940	1,990	1,990
Dayton Power and Light Co.	750	314	324	324	432	447	447	452	467	467	446	456	456	560	570	570	598	613	613
Ohio Fuel Gas Co. (Rural) 2/	100	71	71	71	128	128	128	130	130	130	102	102	102	130	130	130	100	100	100
	2,350	1,555	1,595	1,595	1,928	1,973	1,973	2,032	2,097	2,097	1,982	2,080	2,080	2,282	2,380	2,380	2,638	2,703	2,703
Total Eastern Zone	7,100	4,469	4,563	4,563	5,573	5,687	5,687	6,353	6,496	6,496	5,828	6,001	6,001	6,494	6,674	6,674	7,479	7,634	7,634
Central Zone																			
Missouri																			
Bowling Green Gas Co.	1,999	1,093	1,155	1,155	1,364	1,442	1,442	1,429	1,510	1,510	1,334	1,415	1,415	1,416	1,498	1,498	1,465	1,549	1,549
	1,999	1,093	1,155	1,155	1,364	1,442	1,442	1,429	1,510	1,510	1,334	1,415	1,415	1,416	1,498	1,498	1,465	1,549	1,549
Illinois																			
Morton Municipal Gas Co.	1,975	1,956	1,956	1,956	2,123	2,123	2,123	2,300	2,300	2,300	2,269	2,269	2,269	2,508	2,508	2,508	2,350	2,350	2,350
Pittsfield, City of 2/	1,375	1,321	1,321	1,321	2,385	2,385	2,385	2,327	2,327	2,327	1,826	1,826	1,826	2,327	2,327	2,327	1,975	1,975	1,975
Roodhouse, City of 2/	1,900	1,081	1,081	1,081	1,952	1,952	1,952	1,928	1,928	1,928	1,513	1,513	1,513	1,928	1,928	1,928	1,900	1,900	1,900
Whitehall, City of 2/	1,900	742	742	742	1,340	1,340	1,340	1,371	1,371	1,371	1,076	1,076	1,076	1,371	1,371	1,371	1,900	1,900	1,900
	7,750	5,100	5,100	5,100	7,800	7,800	7,800	7,926	7,926	7,926	6,684	6,684	6,684	8,134	8,134	8,134	8,125	8,125	8,125
Total Central Zone	9,749	6,193	6,255	6,255	9,164	9,242	9,242	9,355	9,436	9,436	8,018	8,099	8,099	9,550	9,632	9,632	9,590	9,674	9,674
Western Zone																			
Kansas																			
American Gas Co.	1,675	559	576	576	630	647	647	655	675	675	702	724	724	758	730	730	582	600	600
Miami Pipe Line Co. 3/	1,950	879	879	879	1,587	1,587	1,587	29	29	29	23	23	23	29	29	29	1,950	1,950	1,950
	3,625	1,438	1,455	1,455	2,217	2,234	2,234	684	704	704	725	747	747	787	809	809	2,532	2,550	2,550
Total Western Zone	3,625	1,438	1,455	1,455	2,217	2,234	2,234	684	704	704	725	747	747	787	809	809	2,532	2,550	2,550
Total Small General	20,474	12,100	12,273	12,273	16,954	17,163	17,163	16,392	16,636	16,636	14,571	14,847	14,847	16,831	17,115	17,115	19,601	19,858	19,858
LIMITED SERVICE																			
East Ohio Gas Co.	85,000	85,617	85,617	85,617	85,617	85,617	85,617	85,000	85,000	85,000	76,134	76,134	76,134	76,134	76,134	76,134	85,000	85,000	85,000
Michigan Consolidated Gas Co.	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000
Michigan Consolidated Gas Co.	125,000	125,000	125,000	125,000	125,000	125,000	125,000	125,000	125,000	125,000	125,000	125,000	125,000	125,000	125,000	125,000	125,000	125,000	125,000
Ohio Fuel Gas Co.	50,000	50,587	50,587	50,587	50,000	50,000	50,000	50,000	50,000	50,000	48,883	48,883	48,883	50,000	50,000	50,000	50,000	50,000	50,000
Texas Gas Transmission Corp.	18,000	17,561	18,000	18,000	18,000	18,000	18,000	18,000	18,000	18,000	17,096	17,096	17,096	18,000	18,000	18,000	18,000	18,000	18,000
Total Limited Service	280,000	280,765	281,204	281,204	280,617	280,617	280,617	280,000	280,000	280,000	269,113	269,113	269,113	271,134	271,134	271,134	280,000	280,000	280,000
STORAGE SERVICE																			
Michigan Gas Storage Co.	-	-	-	-	-	-	-	-	-	-	11,138	11,138	11,138	-	-	-	-	-	-
Total Storage Service	-	-	-	-	-	-	-	-	-	-	11,138	11,138	11,138	-	-	-	-	-	-
LOUISBURG LATERAL																			
Louisburg Gas Co.	750	475	475	475	531	531	531	550	550	550	544	544	544	611	611	611	700	700	700
Central West Utility Co.	10,000	4,211	4,443	4,443	5,061	5,293	5,293	7,130	7,362	7,362	5,540	5,540	5,890	6,000	6,000	6,379	8,207	8,439	8,439
Missouri Power and Light Co. 2/	2,250	2,457	2,556	2,556	3,217	3,350	3,350	3,392	3,528	3,528	2,789	2,009	3,395	3,540	3,682	3,682	3,579	3,722	3,722
Gas Service Co. 2/	17,375	10,642	10,849	10,849	12,791	12,998	12,998	15,316	15,516	15,516	14,680	15,180	15,180	16,336	16,336	16,336	16,156	16,656	16,656
Total Louisburg Lateral	30,375	17,785	18,322	18,322	21,600	22,172	22,172	26,388	26,956	26,956	23,853	24,173	25,009	26,287	26,629	27,008	30,942	31,517	31,517
TOTAL SYSTEM	1,008,133	801,353	877,190	887,976	916,835	956,310	1,002,862	988,167	1,021,174	1,086,381	906,067	953,704	1,006,476	971,707	1,010,018	1,070,918	1,083,192	1,147,036	1,191,103

15381

KNOX

PEORIA

WOODFORD

TAZEWELL

McLEAN

FULTON

MASON

LOGAN

MENARD

SANGAMON

DEWITT

GALESBURG

KNOXVILLE

11 MI. 2"

7.87 MI. 4"

ABINGDON

43.82 MI. 8"

ELMWOOD

P.E.P.L. CO. TO CONSTRUCT
330 HP COMP. STA.

PEORIA

WASHINGTON

2.54 MI. 12" & 10"

7.0 MI. 2"

NORTON

20.74 MI. 6"

1.62 MI. 6"

6.69 MI. 3"

PEKIN

POINT OF MEASUREMENT AND
DELIVERY TO CENTRAL ILLINOIS
PUBLIC SERVICE CO.

CANTON

TO MACOMB

CUBA

LEWISTON

72.56 MI. 16"

HAVANA

POINT OF MEASUREMENT AND
DELIVERY TO ILLINOIS POWER CO.

LINCOLN

CLINTON

10.3 MI. 4"

15 MI. 3"

P.E.P.L. CO. TO CONSTRUCT
6.5 MI. 6" LINE

P.E.P.L. CO. TO CONSTRUCT
13.2 MI. OF LOOP LINE, MADE
UP OF 5.2 MI. 24" - 1.0 MI. 22" -
3.5 MI. 20" - 3.5 MI. 16".

SPRINGFIELD
2.02 MI. 10"

2.91 MI. 10"

P.E.P.L. CO. TO MAKE NECESSARY
PIPING CHANGES

GLENARM COMP.
STA.

P.E.P.L. CO.
MAIN LINES

LEGEND

- EXISTING LINES OWNED AND OPERATED BY P.E.P.L. CO.
- PROPOSED FACILITIES FOR WHICH CERTIFICATE IS SOUGHT
- REGULATOR AND MEASURING STATIONS.
- PIPE LINES OWNED AND OPERATED BY CENTRAL ILLINOIS PUBLIC SERVICE CO.
- PIPE LINES OWNED AND OPERATED BY ILLINOIS POWER CO.

PANHANDLE EASTERN PIPE LINE CO.

EXHIBIT "A"

EXISTING AND PROPOSED FACILITIES
PEORIA LATERAL SYSTEM

DATE 8-13-52	SCALE 1/10" = 1 MILE
DRAWN BY KENNEDY	APPROVED
CHECKED BY	BOOK NO.
APPROVED	DRWG. NO. 1721

(15381)

EXHIBIT 18070

DEARBORN

DETROIT

MEASURING AND REGULATING FACILITIES FOR DELIVERY TO MICHIGAN CONSOLIDATED GAS CO OWNED AND OPERATED BY PANHANDLE EASTERN PIPE LINE CO.

MELVINDALE

MEASURING FACILITIES FOR DELIVERY TO UNION GAS CO OF CANADA LTD., OWNED AND OPERATED BY PANHANDLE EASTERN PIPE LINE CO

RIVER ROUGE

ALLEN PARK

LINCOLN PARK

ECORSE

22"

16"

12"

12"

16"

RIVER

INTERNATIONAL BOUNDARY

PROPERTY OF UNION GAS CO OF CANADA LTD.

MEASURING AND REGULATING FACILITIES OWNED AND OPERATED BY PANHANDLE EASTERN PIPE LINE CO

26"

22"

PANHANDLE EASTERN PIPE LINE CO MAIN LINES

WYANDOTTE

DETROIT

N

RIVERVIEW

1079

PANHANDLE EASTERN PIPE LINE CO.	
FACILITIES FOR SERVICE TO UNION GAS CO. OF CANADA LTD.	
DATE 5-27-54	SCALE
DRAWN BY R C C	APPROVED
CHECKED BY F.E.L.	BOOK NO.
APPROVED A. E. M.	DRWG. NO. 1639

(18070)

Exhibit I-2
F.P.C. Docket No. 19941
Witness
Sheet 1 of 4

PANHANDLE EASTERN PIPE LINE COMPANY
Market Data
Annual Requirements by Classes of Service

(5/12/54)

MMCF (Millions of Cu. Ft.) @ 14.73 psia

General and Small General Service		Rate Schedule	Actual 1951	Actual 1952	Actual 1953	Estimated 1956	Estimated 1957	Estimated 1958
Kansas								
American Gas Company, The		SG-3	75.0	78.0	73.7	71.0	71.0	71.0
Gas Service Company, The	(b)	G-3	1 154.5	1 153.3	1 080.7	-	-	-
Louisburg Gas Company	(a)	SG-3	55.4	61.9	55.1	67.9	69.4	70.0
Miami Pipe Line Company, The	(a)	SG-3	246.7	260.6	190.0	50.4	63.4	68.0
Total Kansas			1 531.6	1 553.8	1 399.5	189.3	203.8	209.0
Missouri								
Bowling Green Gas Company		SG-2	176.2	168.0	156.7	189.1	194.0	196.0
Central West Utility Company, The		G-2	998.3	521.6	573.3	936.1	1 040.2	1 092.0
Citizens Gas Company of Hannibal		G-2	1 032.0	1 058.0	1 030.5	1 273.0	1 304.0	1 320.0
Fulton, City of		G-2	481.8	484.6	469.7	501.1	512.6	519.0
Gas Service Company, The	(b)	G-2	2 163.5	2 361.3	2 429.4	-	-	-
Missouri Edison Company		G-2	312.9	363.5	358.1	491.2	494.7	497.0
Missouri Power & Light Company		G-2	3 234.0	3 497.9	3 631.9	4 339.7	4 556.1	4 664.0
Missouri Utilities Company		G-2	1 378.3	1 586.9	1 524.7	1 919.7	2 037.6	2 097.0
Missouri Western Gas Company		G-2	304.5	348.3	394.0	410.5	418.7	423.0
Total Missouri			10 081.5	10 390.1	10 568.3	10 060.4	10 557.9	10 808.0
Illinois								
Auburn, City of	(a)	SG-2	-	-	-	127.8	142.4	153.3
Central Illinois Electric & Gas Company		G-2	887.0	851.0	996.2	1 335.0	1 420.0	1 462.0
Central Illinois Light Company		G-2	13 055.2	15 973.6	18 221.5	23 254.0	25 223.0	26 208.0
Central Illinois Public Service Company		G-2	3 586.9	4 351.5	4 635.8	6 409.0	6 832.2	7 043.0
Citizens Gas Company		G-2	675.6	701.0	710.2	846.7	884.6	904.0
Illinois Power Company		G-2	6 623.1	7 440.5	9 520.5	14 121.0	15 098.0	15 586.0
Morton Municipal Gas Company		SG-2	238.6	255.3	276.5	388.8	395.1	398.0
Pittsfield, City of	(a)	SG-2	220.7	255.3	250.0	307.9	315.7	320.0
Roodhouse, City of	(a)	SG-2	225.5	193.0	199.6	235.6	239.5	242.0
White Hall, City of	(a)	SG-2	135.7	130.1	134.0	166.5	170.8	173.0
New Communities	(a)	SG-2	-	-	-	511.0	569.4	613.2
Total Illinois			25 648.3	30 151.3	34 944.3	47 703.3	51 290.7	53 102.5
Indiana								
Central Indiana Gas Company		G-1	16 265.5	17 423.3	20 128.6	25 475.0	26 352.0	26 791.0
Greenfield Gas Company, Inc.		G-1	453.0	490.0	544.6	626.0	648.0	659.0
Indiana Gas Distribution Corporation		G-1 & SG-1	637.1	664.7	660.0	926.8	994.6	1 029.0
Indiana Gas & Water Company, Inc.		G-1	6 435.8	6 576.6	7 672.8	9 658.1	10 350.0	10 696.0
Indianapolis, City of		G-1	3 196.0	5 520.0	6 812.3	9 866.0	11 156.0	11 801.0
Kokomo Gas & Fuel Company		G-1	2 870.0	3 361.0	4 062.1	5 638.0	6 036.0	6 235.0
Lapel, Town of		SG-1	62.5	62.6	74.4	89.2	95.0	98.0
Montezuma, Town of		SG-1	68.5	64.4	66.9	99.8	105.9	109.0
Northern Indiana Fuel & Light Company	(a)	G-1	-	-	-	463.6	528.1	587.0
Northern Indiana Public Service Company		G-1	5 159.0	5 732.0	6 694.7	8 950.0	9 398.0	9 622.0
Ohio Valley Gas Corporation		G-1	468.1	501.0	556.7	739.9	790.2	815.0
Pendleton Natural Gas Company		SG-1	120.1	134.0	147.5	191.0	200.0	204.0
Pittsboro, Town of		SG-1	35.5	35.6	37.0	47.4	48.0	49.0
Richmond Gas Corporation		G-1	928.0	971.0	1 069.9	1 325.0	1 380.0	1 407.0
Roachdale, Town of	(a)	SG-1	30.1	33.8	40.2	41.4	43.0	44.0
Total Indiana			36 729.2	41 570.0	48 567.7	64 137.2	68 124.8	70 146.0

PANHANDLE EASTERN PIPE LINE COMPANY
Market Data
Annual Requirements by Classes of Service

5/12/54

MMCF (Millions of Cu. Ft.) @ 14.73 psia

General and Small General Service		Rate Schedule	Actual 1951	Actual 1952	Actual 1953	Estimated 1956	Estimated 1957	Estimated 1958
Ohio								
Central States Natural Gas Company, Inc.		SG-1	113.0	175.0	206.5	297.0	309.0	315.0
Dayton Power & Light Company, The		SG-1	51.2	50.8	55.5	84.1	91.2	95.0
Ohio Fuel Gas Company, The - Rurals	(a)	SG-1	10.2	11.0	12.1	15.5	17.3	17.0
Ohio Gas Company		G-1	1 113.0	1 347.0	1 528.1	2 430.0	2 527.0	2 576.0
Toledo Edison Company, The		G-1	654.1	631.1	524.5	720.4	755.9	774.0
Total Ohio			1 941.5	2 214.9	2 326.7	3 547.0	3 700.4	3 777.0
Michigan								
Albion Gas Light Company, The		G-1	551.0	597.0	466.7	710.0	719.0	723.0
Battle Creek Gas Company		G-1	2 252.0	2 615.0	3 434.8	3 745.0	3 793.0	3 817.0
Citizens Gas Fuel Company		G-1	759.3	986.2	983.3	1 404.0	1 493.0	1 538.0
Michigan Gas Utilities Company		G-1	881.5	1 504.2	2 321.4	3 153.3	3 391.7	3 511.0
Southeastern Michigan Gas Company		G-1	1 652.0	3 013.0	4 795.0	3 017.0	3 382.0	3 565.0
Total Michigan			6 095.8	8 715.4	12 001.2	12 029.3	12 778.7	13 154.0
Total General and Small General Service (Excluding Michigan Gas Storage Company)			82 027.9	94 595.5	109 807.7	137 666.5	146 656.3	151 196.5
Limited Service								
East Ohio Gas Company, The	(a)	LS-1	22 291.2	33 610.8	33 374.9	60 939.0	60 772.5	60 772.5
Michigan Consolidated Gas Company	(a)	LS-1	46 379.7	46 462.9	46 350.3	32 025.0	31 937.5	31 937.5
Ohio Fuel Gas Company	(a)	LS-1	17 472.7	36 739.4	21 748.9	32 940.0	32 850.0	32 850.0
Texas Gas Transmission Corporation	(a)	LS-1	6 012.3	6 187.1	5 848.0	-	-	-
Total Limited Service			174 183.8	217 595.7	107 322.1	263 570.5	272 216.3	276 756.5
General and Storage Service								
Michigan Gas Storage Company	(a)	G-1 & S-1	37 860.4	54 866.9	58 003.5	69 473.6	69 546.1	69 600.0
Export								
Union Gas Company of Canada, Ltd.	(a)		3 325.7	5 500.8	5 501.6	5 500.0	5 500.0	5 500.0
Total Sales for Resale			215 369.9	277 963.4	280 634.9	338 544.1	347 262.4	351 856.5
Residential and Commercial								
Residential			99.8	107.9	119.6	138.5	145.4	152.8
Commercial			1.3	8.2	7.1	8.3	8.7	9.1
Total Residential and Commercial	(a)		101.1	116.1	126.7	146.8	154.1	161.9
Direct Industrial Customers		**Type of Service**						
Kansas								
Osawatomie State Hospital - State of Kansas		Firm	-	-	76.4	264.7	264.0	264.0
Phillips Petroleum Company								
Paola		Interruptible	124.4	123.7	164.4	164.9	164.4	164.4
Sharpe		Interruptible	151.5	165.5	197.5	198.0	197.5	197.5
Other Customers		Interruptible	81.6	71.9	65.8	66.2	66.0	66.0
Total Kansas			357.5	361.1	504.1	693.8	691.9	691.9

5/12/54

PANHANDLE EASTERN PIPE LINE COMPANY
Market Data
Annual Requirements by Classes of Service

Direct Industrial Customers	Type of Service	MMCF (Millions of Cu. Ft.) @ 14.73 psia					
		Actual			Estimated		
		1951	1952	1953	1956	1957	1958
Missouri							
Bureau of Mines - U.S. Dept. of the Interior	Firm	319.1	233.4	81.3	300.8	300.0	300.0
City of Fulton - Power Plant	Dump	100.7	-	-	-	-	-
A.P. Green Fire Brick Company	Firm	2 147.5	2 099.4	1 903.8	1 909.0	1 903.8	1 903.8
Harbison-Walker Refractories Company							
Fulton	Firm	609.9	632.4	504.0	505.4	504.0	504.0
Vandalia	Firm	1 103.5	1 170.4	916.7	919.0	916.6	916.6
Mexico Refractories Company	Firm	1 029.2	983.8	923.6	926.1	923.6	923.6
Missouri Power & Light Company - Power Plant	Interruptible & Dump	544.1	841.0	920.0	922.5	920.0	920.0
North American Refractories Company	Firm	123.1	111.9	130.3	130.7	130.3	130.3
Northeast Missouri Electric Power Coop.	Dump	-	55.6	112.6	112.9	112.6	112.6
Phillips Petroleum Company							
Harrisonville	Interruptible	72.8	81.8	125.1	125.4	125.1	125.1
Jefferson City	Interruptible	61.0	58.9	105.8	106.1	105.8	105.8
Leeton	Interruptible	67.0	72.8	113.1	113.4	113.1	113.1
United Brick & Tile Company	Interruptible	130.4	126.6	121.8	122.1	121.8	121.8
Universal Atlas Cement Company	Firm & Interruptible	266.3	2 073.4	256.4	257.1	256.4	256.4
Walsh Refractories Company	Firm	410.2	474.9	454.4	455.6	454.4	454.4
Wellsville Fire Brick Company	Firm	189.0	253.8	228.2	228.8	228.2	228.2
Other Customers	Interruptible	178.5	160.2	152.0	152.1	151.7	151.7
Total Missouri		7 352.3	9 430.3	7 049.1	7 287.0	7 267.4	7 267.4
Illinois							
Alsey Brick & Tile Company, The	Interruptible	-	-	-	219.6	219.0	219.0
Anderson, Clayton & Company							
Mrs. Tucker's Products Division	Firm & Interruptible	-	-	-	366.0	365.0	365.0
Central Illinois Electric & Gas Company							
Power Plant	Dump	89.0	138.2	135.0	135.4	135.0	135.0
Central Illinois Light Company - Wallace							
Power Plant	Dump	1 358.4	3 285.0	1 343.5	1 347.2	1 343.5	1 343.5
City of Jacksonville - Power Plant	Dump	-	15.6	224.0	224.6	224.0	224.0
City of Morton - Power Plant	Dump	56.3	69.6	74.5	74.7	74.5	74.5
City of Roodhouse - Power Plant	Dump	7.0	27.7	29.4	29.5	29.4	29.4
General Motors Corporation - Central							
Foundry Division	Interruptible	467.6	564.9	919.4	921.9	919.4	919.4
General Refractories Company	Firm	309.7	246.0	164.5	165.0	164.5	164.5
Hegeler Zinc Company	Firm	196.8	198.2	110.8	111.1	110.8	110.8
Illinois Rural Electric Company	Dump	-	18.6	164.5	165.0	164.5	164.5
LaClede Christy Company	Interruptible	-	-	5.5	125.3	125.0	125.0
Marblehead Lime Company							
Marblehead)							
Quincy)	Interruptible	106.3	106.4	126.2	126.5	126.2	126.2
National Petro-Chemicals Corporation							
Fuel	Interruptible	-	-	1 152.8	4 655.7	4 643.0	4 643.0
Hydrocarbons		-	-	2 867.5	7 320.0	7 300.0	7 300.0
Other Customers	Interruptible	92.9	81.2	85.5	121.9	121.6	121.6
Total Illinois		2 684.0	4 751.4	7 403.1	16 109.4	16 065.4	16 065.4

Note

Page 892 is blank.

15374

Item NN by Reference

UNITED STATES OF AMERICA
BEFORE THE FEDERAL POWER COMMISSION

Docket No. G-2037

In the Matter of

PANHANDLE EASTERN PIPE LINE COMPANY

APPLICATION FOR A CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY

Comes now Panhandle Eastern Pipe Line Company ("Panhandle") and files this application for the issuance of a certificate of public convenience and necessity authorizing the construction and operation of certain facilities as hereinafter described.

In support hereof, Panhandle respectfully shows that:

I

The exact legal name of applicant is Panhandle Eastern Pipe Line Company.

II

Panhandle is a corporation organized and existing under the laws of the State of Delaware with its principal office at 1221 Baltimore Avenue, Kansas City 6, Missouri; Panhandle owns and operates (under certificates of public convenience and necessity heretofore issued by the Commission) an integrated natural-gas pipe line system situated in the States of Texas, Oklahoma, Kansas, Missouri, Illinois, Indiana, Ohio and Michigan and is a "natural-gas company" as defined in the Natural Gas Act.

III

Panhandle produces natural gas from extensive leasehold acreage located in the States of Texas, Oklahoma and Kansas and purchases natural

gas produced in Texas, Oklahoma and Kansas. Its pipe line system extends from Texas to its northern termini in Michigan. In connection with the operation thereof, it owns facilities appurtenant thereto and is engaged in the transportation and sale of natural gas in interstate commerce (a) for resale for ultimate public consumption for domestic, commercial, industrial and other uses, and (b) directly to industries and others for their own use.

IV

Panhandle's service has been duly authorized by "grandfather" and "non-grandfather" certificates of public convenience and necessity issued by this Commission.

V

All communications and pleadings in respect to the within application are to be sent to each of the following:

John S. L. Yost
William C. Keefe
Panhandle Eastern Pipe
Line Company
120 Broadway
New York 5, New York

Scott & Littman
Wyatt Building
777 14th Street, N. W.
Washington 5, D. C.

Baker & Daniels
810 Fletcher Trust Building
Indianapolis 4, Indiana

Steptoe & Johnson
1100 Shoreham Building
Washington 5, D. C.

E. H. Lange
Panhandle Eastern Pipe
Line Company
1221 Baltimore Avenue
Kansas City 6, Missouri

VI

Pursuant to the provisions of the Commission's Opinion No. 214 and the accompanying order of the Commission issued June 13, 1951, Panhandle has entered into Service Agreements for the purchase and sale of

15376

gas with forty-five of its utility resale customers. Included among such Service Agreements[1] are the following:

(a) Service Agreement with Central Illinois Light Company, dated July 18, 1951, providing for a contract demand of 99,900 MCF during the five winter months, namely, January, February, March, November and December.

(b) Service Agreement with Central Illinois Electric & Gas Company, dated February 4, 1952, providing for a contract demand of 6,050 MCF during the winter months mentioned in subparagraph (a) above.

(c) Service Agreement with Illinois Power Company, dated February 4, 1952, provided for a contract demand of 67,000 MCF during the winter months mentioned in subparagraph (a) above.

(d) Service Agreement with Central Illinois Public Service Company, dated December 21, 1951, providing for a contract demand of 37,800 MCF during the winter months mentioned in subparagraph (a) above.

(e) Service Agreement with Morton Municipal Gas Company, dated July 3, 1951, providing for a contract demand of 1,975 MCF during the winter months mentioned in subparagraph (a) above.

[1] All of such Service Agreements are on file with the Commission. By order of the Commission issued March 5, 1952, such Service Agreements were permitted to become effective as of February 20, 1952.

Central Illinois Light Company, Central Illinois Electric & Gas Company and Morton Municipal Gas Company purchase all of their gas requirements under such Service Agreements from Panhandle at delivery points located on or near Panhandle's so-called Peoria lateral pipe line, while Illinois Power Company and Central Illinois Public Service Company purchase a portion of their gas requirements under such Service Agreements from Panhandle at delivery points on or near said Peoria lateral.

With the present facilities constituting Panhandle's Peoria lateral pipe line and the lateral pipe lines extending therefrom, Panhandle may be unable to deliver the requirements of such customers under

such Service Agreements at all times during the five winter months of January, February, March, November and December. Panhandle, therefore, proposes to construct additional pipe line facilities to enable it to deliver contract demand volumes.

VII

The proposed facilities, shown on a map attached hereto as Exhibit A and made a part hereof, for which a certificate is sought in this application, together with an estimate of the cost thereof, are as follows:

(a) Construction of 13.2 miles of steel welded lateral pipe line consisting of 3.5 miles of 16 inch O.D. pipe, 3.5 miles of 20 inch O.D. pipe, 1.0 miles of 22 inch O.D. pipe and 5.2 miles of 24 inch O.D. pipe; such lateral pipe line to parallel a portion of existing pipe line facilities on Panhandle's Peoria lateral pipe line extending from Panhandle's main line to Peoria, Illinois.

Labor	—	$229,200	
Materials	—	379,600	
Other Expense[2]	—	107,200	
Estimated total cost	—		$716,000

(b) Construction of 6.5 miles of 6 inch O.D. steel welded lateral pipe line; such lateral pipe line to parallel existing lateral pipe line facilities extending from Panhandle's Peoria lateral pipe line to Lincoln, Illinois.

Labor	—	$ 38,850	
Materials	—	42,850	
Other Expense[2]	—	30,300	
Estimated total cost	—		$112,000

(c) Construction of compressor station to contain one 330 H.P. unit with pipe lines connecting same to Panhandle's lateral pipe lines extending from Peoria lateral pipe line to Galesburg, Illinois, and Canton, Illinois, respectively.

Labor	—	$ 70,000	
Materials	—	20,000	
Land & Buildings	—	17,000	
Other Expense[2]	—	13,000	
Estimated total cost	—		$120,000
Total cost of proposed construction			$948,000

[2] This item includes right-of-way costs, damages, coatings and engineering and supervisory expenses.

If Panhandle is authorized by the Commission to construct and operate such facilities, Panhandle proposes to commence the construction thereof immediately following such authorization and contemplates that all of such facilities will be completed prior to the 1952-53 winter season.

Panhandle intends to finance the cost of the aforesaid facilities out of current funds on hand.

VIII

Testimony with respect to the markets of Central Illinois Light Company, Central Illinois Electric & Gas Company, Morton Municipal Gas Company, Illinois Power Company and Central Illinois Public Service Company and the requirements of such companies for the volumes of gas set forth in the Service Agreements with such companies was introduced in evidence in the hearings in Dockets G-1116, etc. before the Commission.

There were also introduced in evidence in Dockets G-1116, etc. testimony and exhibits by Panhandle with respect to its gas reserves and the economic feasibility of the project of which the proposed facilities are a part. Such testimony and exhibits are incorporated herein by reference.

IX

It is submitted, therefore, that the public convenience and necessity of the proposed facilities have already been determined by the Commission and that the certificate sought by Panhandle herein should be issued. Panhandle is able and willing to do the acts and perform the service proposed herein and to conform to the provisions of the Natural Gas Act, as amended, and the Commission's Rules and Regulations issued thereunder.

X

Panhandle respectfully submits that this matter is of such nature that it should be considered and disposed of at the earliest possible date under the shortened procedure contemplated by Section 1.32(b) of the Commission's Rules of Practice and Procedure. If this application

is handled in this manner, Panhandle waives oral hearing and argument and opportunity for filing exceptions to the decision of the Commission. By reason of the urgent need of these facilities during the coming winter, Panhandle requests that a temporary certificate be issued to it forthwith.

WHEREFORE, by reason of the premises, Panhandle prays that the Commission dispose of this matter under the shortened procedure contemplated by Section 1.32(b) of the Commission's Rules of Practice and Procedure and issue a certificate of public convenience and necessity in accordance with the provisions of Section 7 of the Natural Gas Act, as amended, authorizing the construction and operation of the facilities herein above described. Panhandle further requests that a temporary certificate be

issued by the Commission pending final determination of this matter.

Respectfully submitted,

PANHANDLE EASTERN PIPE LINE COMPANY

By FRED H. ROBINSON (signed)
Fred H. Robinson
Vice President

JOHN S. L. YOST
WILLIAM C. KEEFE
120 Broadway
New York 5, New York

SCOTT & LITTMAN
Wyatt Building
777 14th Street, N. W.
Washington 5, D. C.

BAKER & DANIELS
810 Fletcher Trust Building
Indianapolis 4, Indiana

STEPTOE & JOHNSON
1100 Shoreham Building
Washington 5, D. C.

Attorneys for Panhandle Eastern Pipe Line Company

August 29, 1952

15380

STATE OF NEW YORK }
COUNTY OF NEW YORK } ss.:

FRED H. ROBINSON, being first duly sworn according to law, says that he is a Vice President of Panhandle Eastern Pipe Line Company; that he has read the foregoing Application of said Company and is familiar with the contents thereof; that he has executed the same for and on behalf of said Company with full power and authority so to do; and that the facts set forth therein are true and correct to the best of his knowledge, information and belief.

FRED H. ROBINSON (signed)
Fred H. Robinson

Subscribed and sworn to before me this 29th day of August, 1952.

(SEAL)

HELEN E. PERSON (signed)
Notary Public

HELEN E. PERSON
Notary Public, State of New York
No. 30-8336500
Qualified in Nassau County
Cert. filed with New York
County Clerk and Register
Term Expires March 30, 1954

Note

Page 902 and 904 are blank;

Page 903 is on Card 22.

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Item OO by Reference

UNITED STATES OF AMERICA
FEDERAL POWER COMMISSION

Before Commissioners: Thomas C. Buchanan, Chairman; Dale E. Doty, Claude L. Draper, Nelson Lee Smith and Harrington Wimberly.

December 16, 1952

Docket No. G-2037

In the Matter of

PANHANDLE EASTERN PIPE LINE COMPANY

FINDINGS AND ORDER ISSUING CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY

On September 2, 1952, Panhandle Eastern Pipe Line Company (Applicant) filed an application, as amended on October 10, 1952, for a certificate of public convenience and necessity pursuant to Section 7 of the Natural Gas Act authorizing the construction and operation of certain natural-gas lateral pipe-line facilities to augment the capacity of its so-called Peoria lateral and other lines extending therefrom.

More specifically, Applicant proposes to construct and operate the following lateral pipe-line facilities:

(1) 13.2 miles of lateral loop line—consisting of 3.5 miles of 16-inch pipe, 3.5 miles of 20-inch pipe, 1.0 miles of 22-inch pipe, and 5.2 miles of 24-inch pipe—extending from Glenarm (Illinois) Compressor Station on Applicant's main natural-gas transmission pipe line.

(2) 10 miles of 6⅝-inch lateral pipe line paralleling Applicant's existing pipe-line facilities extending from the Peoria lateral to Lincoln, Illinois.

(3) A 330 H.P. compressor station to be located at the junction of lateral pipe lines extending from the Peoria lateral to Galesburg and Canton, Illinois.

On September 29, 1952, Illinois Power Company, a distributing-company customer of Applicant, filed a petition seeking leave to intervene in this proceeding. Subsequently, on October 30, 1952, the company requested withdrawal of such petition. By order issued November 26, 1952, the Commission permitted such withdrawal.

Pursuant to due notice a public hearing was held in Washington, D. C., on December 15, 1952, respecting the matters involved and the issues presented by the application, as amended. No pending protest

to the application, as amended, has been received.

Temporary authorizations to construct and operate the facilities described above were granted by the Commission on September 24 and November 6, 1952.

By means of the facilities described, Applicant proposes to augment the capacity of the Peoria lateral and lines extending therefrom to enable it to deliver the contract demand volumes of Central Illinois Light Company (99,900 Mcf), Central Illinois Electric & Gas Company (6,050 Mcf), Illinois Power Company (67,000 Mcf), Central Illinois Public Service Company (37,800 Mcf), and Morton Municipal Gas Company (1,975 Mcf). The first two companies and Morton Municipal Gas Company purchase all their gas requirements, under service agreements, from Applicant at delivery points located on or near the Peoria lateral. The other two companies purchase only a portion of their contract requirements at such delivery points. Applicant entered into service agreements with such companies pursuant to the provisions of the Commission's

Opinion No. 214 and accompanying order issued June 13, 1951, *In the Matters of Panhandle Eastern Pipe Line Company, et al,* Docket Nos. G-1116, *et al.* Such service agreements were permitted to become effective as of February 20, 1952, by order of the Commission issued March 5, 1952, in those proceedings.

This record shows that the existing Peoria lateral and the lines extending therefrom are of insufficient capacity to deliver the contract demand volumes of the distributing-company customers served thereby, including 13,400 Mcf per day to Illinois Power Company at its Galesburg, Knoxville and Abingdon delivery points on Applicant's Galesburg lateral pipe line, which extends west of the Peoria lateral. Applicant states that by means of the proposed facilities it will be able to deliver the contract demand volumes to customers at delivery points at or near the Peoria lateral.

The estimated over-all capital cost of the proposed facilities is $1,009,000. Applicant intends to finance the cost of such facilities out of current funds on hand.

The Commission *finds:*

(1) Applicant, a Delaware corporation with its principal place of business at Kansas City, Missouri, owns and operates, among other facilities, a natural-gas transmission pipeline system located in the States of Texas, Oklahoma, Kansas, Missouri, Illinois, Indiana, Ohio, and Michigan By such operations Applicant is engaged in the transportation and sale of natural gas in interstate commerce for resale for ultimate public consumption, subject to the jurisdiction of the Commission, and is, therefore, a

"natural-gas company" within the meaning of the Natural Gas Act, as heretofore found by the Commission in its

order of October 17, 1945. *In the Matter of Panhandle Eastern Pipe Line Company, et al,* Docket No. G-254, 4 FPC 1081.

(2) The facilities hereinbefore described are proposed to be used for the transportation and sale of natural gas in interstate commerce, subject to the jurisdiction of the Commission, as an integral part of Applicant's existing pipe-line system, and the construction and operation thereof by Applicant are subject to the requirements of subsections (c) and (e) of Section 7 of the Natural Gas Act.

(3) Applicant is able and willing properly to do the acts and to perform the service proposed and to conform to the provisions of the Natural Gas Act, and the requirements, rules and regulations of the Commission thereunder.

(4) The proposed construction and operation of the facilites by Applicant are required by the public convenience and necessity and a certificate therefor should be issued as hereinafter ordered.

(5) Applicant having requested the omission of the intermediate decision procedure and all the requirements of the provisions of Section 1.32(b) of the Commission's Rules of Practice and Procedure [18 CFR 1.32(b)] having been satisfied, sufficient cause exists for the Commission forthwith to render its final decision in the instant proceeding.

The Commission *orders:*

(A) A certificate of public convenience and necessity be and the same is hereby issued authorizing Applicant to construct and operate the facilities hereinbefore described, all as more fully described in the application, as amended, in this proceeding and the exhibits appended thereto, for the transportation and sale of natural gas as therein set forth, subject to the jurisdiction of the Commission, upon the terms and conditions of this order.

(B) The following condition, be and the same is hereby attached to the issuance of the certificate issued in paragraph (A) hereof:

15385

The certificate herein granted shall be void and without force or effect unless accepted in writing by Applicant within 30 days from the date of issuance of this order.

(C) The following conditions be and the same are hereby attached to the exercise of rights granted by the certificate issued in paragraph (A) hereof.

(1) Construction of the facilities herein authorized shall be completed and the operation and the service herein authorized shall be actually undertaken and regularly performed by Applicant within six (6) months from the date of issuance of this order.

(2) Applicant shall file with the Commission, in writing and under oath, an original and four conformed copies of the following:

(a) within ten days after issuance of this order, notice of date construction was *bona fide* commenced;

(b) each three months after the date of issuance of this order, a progress report showing the exact status of the construction authorized herein;

(c) within ten days after issuance of this order, notice of date any facilities herein authorized were constructed and placed in service, or any operation and service herein authorized were commenced; and, similarly, within ten days after all facilities herein authorized have been constructed and placed in service, and all operation and service herein authorized have commenced, notice of the date of such placement and commencement;

(d) within six months after the facilities herein authorized have been constructed and placed in service and operation as herein authorized has commenced, a statement showing the actual cost of constructing said facilities by operating units, and showing separately the actual cost of labor, materials, rights-of-way, damages, surveys, engineering, inspection, overhead, interest during construction, contingencies, and all other items of cost, together with a

statement showing and explaining the cause for any difference between actual cost and estimate of cost relied upon by Applicant in this proceeding.

(3) This certificate is not transferable and shall be effective only so long as Applicant continues the operation authorized by this order issuing such certificate and in accordance with the provision of the Natural Gas Act, as well as any applicable rules, regulations, or orders of the Commission.

By the Commission.

LEON M. FUQUAY,
Secretary.

Date of Issuance: December 16, 1952

15387

Item PP by Reference

UNITED STATES OF AMERICA

FEDERAL POWER COMMISSION

Docket No. G-2037

In the Matter of

PANHANDLE EASTERN PIPE LINE COMPANY

CERTIFICATE OF COMPLIANCE

COMES Now Panhandle Eastern Pipe Line Company, Applicant herein, and, in compliance with the provisions of Paragraph "(C)" "(2)", Subsections "(a)" and "(c)", of the Order issued by the Commission on December 16, 1952, respectfully represents:

Pursuant to temporary authorizations issued by the Commision on September 24 and November 6, 1952, Applicant commenced the construction of the facilities on October 16, 1952; and the said facilities, with the exception of the Lincoln, Illinois Lateral, were placed in service on December 12, 1952. The Lincoln, Illinois Lateral was placed in service on December 17, 1952.

Respectfully submitted,

PANHANDLE EASTERN PIPE LINE COMPANY

By /s/ D. A. ROBERTSON
D. A. Robertson, *Assistant Secretary*

Dated at Kansas City, Missouri,
December 24, 1952.

15388

STATE OF MISSOURI
COUNTY OF JACKSON } ss.

D. A. ROBERTSON, being first duly sworn, on oath, says that he is the Assistant Secretary of Panhandle Eastern Pipe Line Company; that he has read the foregoing Certificate of Compliance; and that the statements therein contained are true, to the best of his knowledge and belief.

/s/ D. A. ROBERTSON
Assistant Secretary

Subscribed and sworn to before me this 24th day of December, 1952.

/s/ MARY C. MAGERS
Notary Public

My Commission expires: Sept. 3, 1955.

(SEAL)

15389

UNITED STATES OF AMERICA
FEDERAL POWER COMMISSION

Docket No. G-2037

In the Matter of

PANHANDLE EASTERN PIPE LINE COMPANY

SUPPLEMENTAL CERTIFICATE OF COMPLIANCE

COMES Now Panhandle Eastern Pipe Line Company, Applicant herein, and, in compliance with the provisions of Paragraph "(C)""(2)", Subsections "(a)" and "(c)", of the Commission's Order issued on December 16, 1952, respectfully represents:

The "330 H.P. compressor station * * * located at the junction of lateral pipe lines extending from the Peoria lateral to Galesburg and Canton, Illinois" was placed in service on December 30, 1952.

Respectfully submitted,

PANHANDLE EASTERN PIPE LINE COMPANY

By /s/ F. D. MATHIAS
Assistant Treasurer

Dated at Kansas City, Missouri,
December 31, 1952.

15390

STATE OF MISSOURI
COUNTY OF JACKSON } ss.

F. D. MATHIAS, being first duly sworn, on oath, says that he is the Assistant Treasurer of Panhandle Eastern Pipe Line Company; that he has read the foregoing Supplemental Certificate of Compliance; and that the statements therein contained are true, to the best of his knowledge and belief.

/s/ F. D. MATHIAS
Assistant Treasurer

Subscribed and sworn to before me this 31st day of December, 1952.

/s/ MARGUERITE STEWART
Notary Public

My Commission expires: March 7, 1955.

(SEAL)

15391

Item QQ by Reference

PANHANDLE EASTERN PIPE LINE COMPANY
1221 Baltimore Ave.
Kansas City 5, Mo.

January 12, 1953

Federal Power Commission
1800 Pennsylvania Avenue N. W.
Washington 25, D. C.

Attention: Mr. Leon M. Fuquay, Secretary

Gentlemen:

Re: Docket No. G-2037

With reference to the provisions of Paragraph "(B)" of the Order that was issued by the Commission on December 16, 1952, in the above-numbered docket, Panhandle Eastern Pipe Line Company hereby accepts the Certificate of Public Convenience and Necessity granted in the said Order.

Very truly yours,

PANHANDLE EASTERN PIPE LINE COMPANY

By C. H. M. BURNHAM
C. H. M. Burnham,
Vice-President.

In the Matter of
Panhandle Eastern Pipe Line Company } Docket No. G-2037

"Statement," pursuant to paragraph ("C") ("d") of Order issued December 16, 1952

Classification of Costs	Peoria Lateral Loop[1] Application Estimate	Peoria Lateral Loop[1] Actual Cost	Lincoln Lateral Loop[2] Application Estimate	Lincoln Lateral Loop[2] Actual Cost	Bartonville Compr. Sta.[3] Application Estimate	Bartonville Compr. Sta.[3] Actual Cost	Total Project Application Estimate	Total Project Actual Cost	Total Project Over or (Under)	
Labor	$229,200	$206,240	$ 59,000	$ 67,878	$ 20,000*	$ 19,348	$ 308,200	$293,466	($14,734)	(i)
Material	379,600	308,324	69,000	59,737	70,000*	84,007	518,600	452,068	(66,532)	(ii) (iii)
Other Expense										
I Rights of Way & Damages		24,450		19,766		3,164		47,380		
II Surveys & Mapping, Engineering & Inspection	107,200	7,463	45,000	3,574	30,000	21,254	182,200	32,291	43,080	(iii)
III Overheads		—		—		—		—		
IV Interest During Construction		—		—		—		—		
V Contingencies & Misc. Expense		110,514		22,366		12,729		145,609		
Total	$716,000	$656,991	$173,000	$173,321	$120,000	$140,502	$1,009,000	$970,814	($38,186)	under

1 Item ("a") under paragraph "VII" of the application.
2 Item under paragraph "I" of amendment to application.
3 Item ("c") under paragraph "VII" of the application.

* Inadvertently reversed in application.

EXPLANATION OF THE PRINCIPAL CAUSES FOR DIFFERENCE BETWEEN ACTUAL COST AND ESTIMATE OF COST RELIED UPON BY APPLICANT IN THIS PROCEEDING

(i) Estimated on basis of winter construction; contracts were awarded on basis of summer construction.
(ii) Material used from warehouse stock, the cost of which was less than estimated.
(iii) Materials shipped from Company warehouses, the cost of freight being classified as an expense rather than part of material cost.

Dated: June 8, 1953

15393

STATE OF MISSOURI }
COUNTY OF JACKSON } ss.

C. H. M. BURNHAM, being first duly sworn, states, on oath, that he is a Vice-President of Panhandle Eastern Pipe Line Company; that he has read the attached "Statement" and is familiar with the contents thereof; and that the facts set forth therein are true and correct, to the best of his knowledge, information and belief.

C. H. M. BURNHAM
Vice-President

Subscribed and sworn to before me by C. H. M. Burnham, this 8th day of June, 1953.

MARGUERITE STEWART
Notary Public

(SEAL)

My Commission expires:
March 7, 1955

15398

Item SS by Reference

(Excerpt)

Exhibit X-A1
FPC Docket G-1
Witness:
Page 1 of 1

PANHANDLE EASTERN PIPE LINE COMPANY
120 BROADWAY
NEW YORK 5, N.Y.
JANUARY 8, 1954

Dear Sirs:

You will recall that we sent you a questionnaire, in December, 1953, requesting information as to your gas requirements for the next few years.

We now propose to enter into agreements with our utility customers with whom we presently have service agreements for additional deliveries of gas for the period commencing November 1, 1955. It is contemplated that such deliveries will be made from storage facilities to be located near Waverly, Illinois.

Enclosed herewith are three copies of a form of letter agreement which will enable you to designate the contract demand volumes of gas you wish to purchase from us commencing November 1, 1955. If you are interested in purchasing additional quantities of gas from us, please indicate the quantities you which to purchase as of that date by filling in the blanks in such letter and return all three executed copies of the same not later than January 18, 1954.

If the volumes which you desire to purchase differ appreciably from the peak-day supply from us for the winter 1955-56 listed on page 5 of our questionnaire, we shall appreciate it if you will communicate with us prior to the execution of the enclosed agreement. It is also suggested that, for our mutual convenience, the volumes designated by you be rounded to the nearest one hundred Mcf (100 Mcf).

Please advise us if you are not interested in contracting for additional volumes of gas.

Yours very truly,

PANHANDLE EASTERN PIPE LINE COMPANY

By (Signed) Fred H. Robinson
Vice President

15399

Exhibit X-A2
FPC Docket No. G-
Witness:
Sheet 1 of 4

January , 1954

Panhandle Eastern Pipe Line Company
120 Broadway
New York 5, New York

Dear Sirs:

The purpose of this letter is to state the agreement between us with respect to an increase in the quantities of gas sold by Panhandle Eastern Pipe Line Company (Panhandle) to the undersigned.

Panhandle is selling natural gas to us and we are purchasing natural gas from Panhandle under a certain service agreement dated , which is on file with the Federal Power Commission and which provides a contract demand of Mcf per day for the five winter months, November, December, January, February and March and varying contract demands for the remaining months of the year.

We understand that Panhandle has, for sometime past, been engaged in exploratory work looking toward the development of a large underground natural gas storage reservoir near Waverly, Illinois, adjacent to Panhandle's main line. We understand further that Panhandle's plan for Waverly Storage Field calls for development of the field, in the initial phase, to afford an adequate volume of working storage with respect to deliverability and seasonal volume; that the first phase of development will be completed by November 1, 1955; that, subject to certain conditions hereinafter mentioned, volumes of gas can be made

available from such underground storage to Panhandle's General Service and Small General Service customers on or about November 1, 1955; and that, during the winter

of 1954-55, when the Storage Field will still be in development, smaller volumes of gas may be made available to General Service and Small General Service customers.

The conditions mentioned in the immediately-preceding paragraph are as follows:

1. That certain problems relating to the physical operation of the storage project, which are now being studied by Panhandle, are solved to the satisfaction of Panhandle.

2. That Panhandle's General Service and Small General Service customers will enter into contracts with Panhandle for additional volumes of gas in volumes which, in the aggregate, will make the storage program feasible.

3. That Panhandle will be allowed to collect rates for the gas thus provided which, in Panhandle's judgment, will justify the very substantial investment which Panhandle will be required to make in the development and operation of the Storage Field.

4. That all necessary certificates of convenience and necessity and other governmental authorizations be obtained by Panhandle in form and substance satisfactory to Panhandle.

With the above understanding, it is our intention to enter into a new service agreement with Panhandle superseding the service agreement presently in effect which will provide for increased contract demands, which Panhandle will be able to supply by reason of its storage program mentioned above and which will become effective November 1, 1955, or as soon thereafter as the necessary facilities can be constructed and placed in operation, and will extend for the

balance of the term of the present service agreement between us.

To that end, we set forth below our estimate of contract demands which we will require and for which we will be willing to contract for the period beginning November 1, 1955, and extending for the duration of the service agreement between us. Such contract demands are as follows:

November)	
December)	
January)	.....
February)	
March)	
April	.....
May	.....
June	.....
July	.....
August	.....
September	.....
October	.....

In the event that Panhandle notifies us by August 1, 1954, that tests have shown that the Waverly Storage Field can be developed successfully, we will execute a new service agreement or agreements to be tendered us by Panhandle on or before that date, which will provide (a) that the contract demands in our present service agreement will be increased as set forth above commencing as of November 1, 1955, and (b) that the contract demands for the period commencing

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November 1, 1954, through October 31, 1955, will be increased in an amount to be agreed upon between us, but not in excess of 50% of the increase in contract demands provided for as of November 1, 1955.

Yours very truly,

.....

By.....

The above correctly states our understanding and agreement.

PANHANDLE EASTERN PIPE LINE COMPANY

By.....

PANHANDLE EASTERN PIPE LINE COMPANY

Market Data
Number of Customers by Classes of Service
The Gas Service Company (Name of Purchaser)
Missouri (Local) (Distribution System)

(A)	Customer Classification (B)	As of January 1st Actual 1951 (C)	1952 (D)	1953 (E)	Estimated 1954 (F)
	Residential				
1.	Non-Heating	526	545	580	664
2.	Space-Heating	4,731	5,520	6,660	8,260
3.	Total Residential	5,257	6,065	7,240	8,924
	Commercial				
4.	Non-Heating	49	48	46	46
5.	Space-Heating	444	487	528	535
6.	Total Commercial	493	535	574	581
7.	Firm Industrial	1	1	1	1
8.	Interruptible Industrial	-	-	-	-
9.	Other Customers	-	-	-	-
10.	Total Customers	5,751	6,601	7,815	9,506

		As of January 1st Estimated 1955 (G)	1956 (H)	1957 (I)	1958 (J)
	Residential				
11.	Non-Heating	664	664	664	664
12.	Space-Heating	10,260	12,260	14,260	16,260
13.	Total Residential	10,924	12,924	14,924	16,924
	Commercial				
14.	Non-Heating	46	46	46	46
15.	Space-Heating	535	545	555	565
16.	Total Commercial	581	591	601	611
17.	Firm Industrial	1	1	1	1
18.	Interruptible Industrial	-	-	-	-
19.	Other Customers	-	-	-	-
20.	Total Customers	11,506	13,516	15,526	17,536

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PANHANDLE EASTERN PIPE LINE COMPANY

Market Data
Annual Gas Requirements by Classes of Service
The Gas Service Company (Name of Purchaser)
Missouri (Local) (Distribution System)

MMCF (Millions of Cu. Ft.) @ 14.73 psia

(A)	Annual Gas Requirements (B)	Actual 1950 (C)	1951 (D)	1952 (E)	Estimated 1953 (F)	1954 (G)	1955 (H)	1956 (I)	1957 (J)
	Sales								
	Residential								
1.	No Heating	19,199	19,892	21,170	24,236	24,236	24,236	24,236	24,236
2.	Space-Heating	709,471	902,936	1,001,275	1,047,559	1,434,021	1,724,021	2,014,021	2,304,021
3.	Total Residential	728,670	922,828	1,022,445	1,071,795	1,458,257	1,748,257	2,038,257	2,328,257
	Commercial								
4.	Non-Heating	5,366	5,256	5,037	5,037	5,037	5,037	5,037	5,037
5.	Space-Heating	188,827	223,800	240,160	245,451	267,995	272,715	277,435	282,155
6.	Total Commercial	194,193	229,056	245,197	250,488	273,032	277,752	282,472	287,192
7.	Firm Industrial	31,073	28,846	53,565	45,119	45,000	45,000	45,000	45,000
8.	Interruptible Industrial	-	-	-	-	-	-	-	-
		-	-	-	-	-	-	-	-
9.	Other Sales								
10.	Total Sales	953,936	1,180,730	1,321,207	1,367,402	1,776,289	2,071,009	2,365,729	2,660,449
11.	Company Use and Unaccounted-For	61,962	78,319	104,911	104,512	100,000	100,000	100,000	100,000
12.	Total Send-Out	1,015,898	1,259,049	1,426,118	1,471,914	1,876,289	2,171,009	2,465,729	2,760,449
	Curtailments								
13.	Firm Industrial								
14.	Interruptible Industrial								
15.	Other								
16.	Total Curtailments	-	-	-	-	-	-	-	-
17.	Total Annual Gas Requirements	1,015,898	1,259,049	1,426,118	1,471,914	1,876,289	2,171,009	2,465,729	2,760,449

PANHANDLE EASTERN PIPE LINE COMPANY

Market Data
Peak Day Gas Requirements by Classes of Service
The Gas Service Company (Name of Purchaser)
Missouri (Local) (Distribution System)

MCF (Thousands of Cu. Ft.) @ 14.73 psia

(A)	Peak Day Gas Requirements (*) (B)	Actual 1950-51 (C)	Actual 1951-52 (D)	Actual 1952-53 (E)	Estimated 1953-54 (F)	Estimated 1954-55 (G)	Estimated 1955-56 (H)	Estimated 1956-57 (I)	Estimated 1957-58 (J)
	Sales								
	Residential								
1.	Non-Heating	54	55	58	66	66	66	66	66
2.	Space-Heating	7,941	8,216	8,658	12,968	16,108	19,248	22,388	25,528
3.	Total Residential	7,995	8,271	8,716	13,034	16,174	19,314	22,454	25,594
	Commercial								
4.	Non-Heating	15	14	14	14	14	14	14	14
5.	Space-Heating	2,018	1,958	1,912	2,268	2,268	2,310	2,353	2,396
6.	Total Commercial	2,033	1,972	1,926	2,282	2,282	2,324	2,367	2,410
7.	Firm Industrial	-	-	-	-	-	-	-	-
8.	Interruptible Industrial	-	-	-	-	-	-	-	-
9.	Other Sales	-	-	-	-	-	-	-	-
10.	Total Sales	10,028	10,243	10,642	15,316	18,456	21,638	24,821	28,004
11.	Increase in Holder Stock	-	-	-	-	-	-	-	-
12.	Company Use and Unaccounted-For	207	207	207	200	200	200	200	200
13.	Total Send-Out	10,235	10,450	10,849	15,516	18,656	21,838	25,021	28,204
	Curtailments								
14.	Firm Industrial								
15.	Interruptible Industrial								
16.	Other								
17.	Total Curtailments	-	-	-	-	-	-	-	-
18.	Total Peak Day Gas Requirements	10,235	10,450	10,849	15,516	18,656	21,838	25,021	28,204
19.	Date	Feb.1,1951	Dec.15,1951	Jan.16,1953					
20.	Mean Temperatur	+1°F.	+3°F.	+12°F.	0°F.	0°F.	0°F.	0°F	0°F

Note: (*) Day of Maximum send-out of firm gas.

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Exhibit X-6
Sheet 1 of 8

THE CENTRAL WEST UTILITY COMPANY

602 Finance Building
Kansas City 6W, Missouri

Mr. M. Farley,
Manager, Rate Department,
Panhandle Eastern Pipe Line Co.
1221 Baltimore Avenue,
Kansas City 5, Missouri.

Dear Mr. Farley;

Enclosed please find questionnaire completed as requested in your letter of December 3, 1953.

Yours very truly,

THE CENTRAL WEST UTILITY COMPANY

H. W. Rutledge, President

HWR/as

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PANHANDLE EASTERN PIPE LINE COMPANY

Market Data
Number of Customers by Classes of Service
The Central West Utility Co. (Name of Purchaser)
Clay County, Missouri (Distribution System)

(A)	Customer Classification (B)	As of January 1st Actual 1951 (C)	1952 (D)	1953 (E)	Estimated 1954 (F)
	Residential				
1.	Non-Heating	564	226	220	235
2.	Space-Heating	3,782	1,571	2,017	2,442
3.	Total Residential	4,346	1,797	2,237	2,677
	Commercial				
4.	Non-Heating	32	16	14	12
5.	Space Heating	216	194	226	258
6.	Total Commercial	248	210	240	270
7.	Firm Industrial				
8.	Interruptible Industrial				
9.	Other Customers				
10.	Total Customers	4,594	2,007	2,477	2,947

		As of January 1st Estimated 1955 (G)	1956 (H)	1957 (I)	1958 (J)
	Residential				
11.	Non-Heating	240	245	250	255
12.	Space-Heating	2,877	3,312	3,747	4,182
13.	Total Residential	3,117	3,557	3,997	4,437
	Commercial				
14.	Non-Heating	12		12	12
15.	Space-Heating	288	31.	348	378
16	Total Commercial	300	330	360	390
17.	Firm Industrial				
18.	Interruptible Industrial				
19.	Other Customers				
20.	Total Customers	3,417	3,887	4,357	4,827

*Data for January 1, 1951 includes customers transferred on December 21, 1951 to the Gas Service Company as a result of the sale of the Company's properties in Kansas City North and Avondale, Missouri as follows:

	Residential		Commercial	
K.C.North & Avondale	Non-Heating	296	Non-Heating	7
Dist. Jan, 1951	Space Heating	2,419	Space - Heating	55
	Total	2,715	Total	62

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2.

NOTE:

Actual and estimated data in this Questionnaire was converted from Company's fiscal records to calendar year and volumes were converted from Company's measurement base to Panhandle's base. The Company's records do not distinguish between space-heating and non-space heating customers; hence the analyses of sales between these two categories were estimated.

Exhibit X-6
Sheet 3 of 8

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PANHANDLE EASTERN PIPE LINE COMPANY

Market Data

Annual Gas Requirements by Classes of Service

The Central West Utility Co. (Name of Purchaser)

Clay County, Missouri (Distribution System)

MMCF (Millions of Cu. Ft.) @ 14.73 psia

(A)	Annual Gas Requirements (B)	Actual 1950 (C)	Actual 1951 (D)	Actual 1952 (E)	Actual 1953 (F)	Estimated 1954 (G)	Estimated 1955 (H)	Estimated 1956 (I)	Estimated 1957 (J)
	Sales								
	Residential								
1.	Non-Heating	39,672	20,880	8,028	8,208	8,568	8,748	8,928	9,108
2.	Space-Heating	533,298	717,241	351,516	394,928	538,762	628,285	716,590	804,895
3.	Total Residential	572,970	738,121	359,544	403,136	547,330	637,033	725,518	814,003
	Commercial								
4.	Non-Heating	1,200	728	452	451	384	384	384	384
5.	Space-Heating	110,703	139,380	120,898	113,240	142,779	158,469	174,159	189,849
6.	Total Commercial	111,903	140,108	121,350	113,691	143,163	158,853	174,543	190,233
7.	Firm Industrial	None	None	None	None				
8.	Interruptible Industrial	None	None	None	None				
9.	Other Sales								
10.	Total Sales	684,873	878,229	480,894	516,827	690,493	795,886	900,061	1,004,236
11.	Company Use and Unaccounted-For	81,653	120,043	40,668	58,000	36,000	36,000	36,000	36,000
12.	Total Send-Out	766,526	998,272	521,562	574,827	726,493	831,886	936,061	1,040,236
	Curtailments								
13.	Firm Industrial	None	None	None	None				
14.	Interruptible Industrial	None	None	None	None				
15.	Other	Est. 10,000	Est. 10,000	-	-				
16.	Total Curtailments	Est. 10,000	Est. 10,000	-	-				
17.	Total Annual Gas Requirements	776,526	1,008,272	521,562	574,827	726,493	831,886	936,061	1,040,236

*Data for 1950 and 1951 includes requirements for Kansas City North and Avondale - Property sold December 21, 1951.

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Exhibit X 6
Sheet 4 of [illegible]

PANHANDLE EASTERN PIPE LINE COMPANY

Market Data
Peak Day Gas Requirements by Classes of Service
The Central West Utility Company (Name of Purchaser)
Clay County, Missouri (Distribution System)

MCF (Thousands of Cu. Ft.) @ 14.73 psia

(A)	Peak Day Gas Requirements (*) (B)	Actual 1950-51 (C)	Actual 1951-52 (D)	Actual 1952-53 (E)	Estimated 1953-54 (F)	Estimated 1954-55 (G)	Estimated 1955-56 (H)	Estimated 1956-57 (I)	Estimated 1957-58 (J)
	Sales								
	Residential								
1.	Non-Heating	69	95	25	27	28	29	29	30
2.	Space-Heating	6,115	6,046	3,010	5,313	6,203	7,093	7,984	8,874
3.	Total Residential	6,184	6,141	3,035	5,340	6,231	7,122	8,013	8,904
	Commercial								
4.	Non-Heating	4	3	5	4	4	4	4	4
5	Space-Heating	1,253	1,186	1,171	1,786	1,972	2,158	2,344	2,530
6.	Total Commercial	1,257	1,189	1,176	1,790	1,976	2,162	2,348	2,534
7.	Firm Industrial								
8.	Interruptible Industrial								
9.	Other Sales								
10.	Total Sales	7,441	7,330	4,211	7,130	8,207	9,284	10,361	11,439
11.	Increase in Holder Stock								
12.	Company Use and Unaccounted-For	300	230	232	232	232	232	232	232
13.	Total Send-Out	7,741	7,560	4,443	7,362	8,439	9,516	10,593	11,670
	Curtailments								
14.	Firm Industrial	None **	None **	None					
15.	Interruptible Industrial	None	None	None					
16.	Other	Est. 220	Est. 220						
17.	Total Curtailments	Est. 220	Est. 220						
18.	Total Peak Day Gas Requirements	Many customers without gas Est.9,000	Est.9,500	4,443	7,362	8,439	9,516	10,593	11,670
19.	Date	2/1/51	12/14/51	1/15/53					
20.	Mean Temperature	0°F	3°F	11°F	0°F	0°F	0°F	0°F	0°F

Note: (*) Day of Maximum send-out of firm gas.

** Many domestic and commercial customers without gas or with insufficient gas during Peak days of 1950 and 1951.

Note: (*) Day of maximum send-out of firm gas.

Exhibit X-6
Sheet 5 of 8

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PANHANDLE EASTERN PIPE LINE COMPANY

Market Data
Annual Gas Supply

The Central West Utility Company (Name of Purchaser)
Clay County, Missouri (Distribution System)

MMCF (Millions of Cu. Ft.) @ 14.73 psia

	Annual Gas Supply	Actual			Estimated				
		1950	1951	1952	1953	1954	1955	1956	1957
	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)
	Natural Gas Purchases								
1.	Pipe Line Companies								
	P.E.P.L. Co.	766,526	998,272	521,562	574,827	726,493	831,886	936,061	1,040,236
2.									
3.	Other Sources								
4.	Total Natural Gas Purchases	766,526	998,272	521,562	574,827	726,493	831,886	936,061	1,040,236
5.	Natural Gas Production -		352	72					
	Total	766,526	998,624	521,634	574,827	726,493	831,886	936,061	1,040,236
6.	From Underground Storage								
7.	From Holders and Line Pack								
8.	Total Natural Gas Supply	766,526	998,624	521,634	574,827	726,493	831,886	936,061	1,040,236
	Manufactured Gas								
9.	Purchases								
10.	Production								
11.	Water Gas, Oil Gas, etc.								
12.	Liquefied Petroleum Gas								
13.	Total Manufactured Gas	None	None	None	None	None	None	None	None
14.	Total Annual Gas Supply	766,526	998,624	521,634	574,827	726,493	831,886	936,061	1,040,236

Exhibit X
Sheet 5 of

PANHANDLE EASTERN PIPE LINE COMPANY

Market Data
Peak Day Gas Supply

The Central West Utility Company (Name of Purchaser)
Clay County, Missouri (Distribution System)

MCF (Thousands of Cu. Ft.) @ 14.73 psia

(A)	Peak Day Gas Supply (*) (B)	Actual 1950-51 (C)	1951-52 (D)	1952-53 (E)	1953-54 (F)	1954-55 (G)	Estimated 1955-56 (H)	1956-57 (I)	1957-58 (J)
	Natural Gas Purchases								
1.	Pipe Line Companies								
	P.E.P.L. Co.	7,741	7,560	4,443	7,362	8,439	9,516	10,593	11,6[illegible]
2.									
3.	Other Sources								
4.	Total Natural Gas Purchases	7,741	7,560	4,443	7,362	8,439	9,516	10,593	11,6[illegible]
5.	Natural Gas Production - Total								
6.	From Underground Storage								
7.	From Holders and Line Pack								
8.	Total Natural Gas Supply	7,741	7,560	4,443	7,362	8,439	9,516	10,593	[illegible]
	Manufactured Gas								
9.	Purchases								
10.	Production								
11.	Water Gas, Oil Gas, etc.								
12.	Liquefied Petroleum Gas								
13.	Total Manufactured Gas	None	None	None	None	None	None	None	None
14.	Total Peak Day Gas Supply	7,741	7,560	4,443	7,362	8,439	9,516	10,593	11,6[illegible]

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PANHANDLE EASTERN PIPE LINE COMPANY

Market Data

Basic Factors Used in Estimating Future Gas Requirements

The Central West Utility Company (Name of Purchaser)

Clay County, Missouri (Distribution System)

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(A)	(B)	Annual (C)	Peak Day (D)
1.	Degree Day Deficiency	4,998	65

		Actual			Estimated
		1950 (E)	1951 (F)	1952 (G)	1953 (H)
2.	Annual Load Factor of Purchaser	32%	35%	41%	35%

		Estimated			
		1954 (I)	1955 (J)	1956 (K)	1957 (L)
3.	Annual Load Factor of Purchaser	35%	35%	35%	35%

		Estimated Annual Use Per Customer - MCF				
	Customer Classification	1953 (M)	1954 (N)	1955 (O)	1956 (P)	1957 (Q)
	Residential					
4.	Non-Heating	36	36	36	36	36
5.	Space-Heating	177	203	203	203	203
	Commercial					
6.	Non-Heating	32	32	32	32	32
7.	Space-Heating	457	523	523	523	523
8.	Firm Industrial					
9.	Intr. Industrial					
10.						
11.						

		Estimated Peak Day Use Per Customer - MCF				
		1953-54 (R)	1954-55 (S)	1955-56 (T)	1956-57 (U)	1957-58 (V)
	Residential					
12.	Non-Heating	0.114	0.114	0.114	0.114	0.114
13.	Space-Heating	1.8	1.8	1.8	1.8	1.8
	Commercial					
14.	Non-Heating	.36	.36	.36	.36	.36
15.	Space-Heating	6.2	6.2	6.2	6.2	6.2
16.	Firm Industrial					
17.	Intr. Industrial					
18.						
19.						

		Estimated As of January 1st			
		Actual			Estimated
		1951 (W)	1952 (X)	1953 (Y)	1954 (Z)
20.	Space Heating Sat. - %	87	88	91	92

		Estimated			
		1955 (AA)	1956 (BB)	1957 (CC)	1958 (DD)
21.	Space Heating Sat. - %	93	93	94	94

Exhibit X-6
Sheet 8 of 8

PANHANDLE EASTERN PIPE LINE COMPANY

Market Data
Miscellaneous Information as Provided in
Sub-Paragraphs (6) and (8) of Exhibit I
The Central West Utility Co. (Name of Purchaser)
Clay County, Missouri (Distribution System)

(1) Will it be necessary for your company to build new facilities to provide service in the communities listed in this questionnaire?

If answer is yes, describe such facilities and state the estimated cost thereof.

Routine main extensions, services, meters and regulators at average cost of about $200.00 per new customer to be added as follows:

1954 -	$94,000.00
1955 -	94,000.00
1956 -	94,000.00
1957 -	94,000.00
1958 -	94,000.00
Total	$470,000.00

(2) Please state your company's franchise rights with respect to each community covered by this questionnaire.

The County Court of Clay County, Missouri authorized a predecessor company, Arrow Pipe Line Company to excavate for and to install gas pipe lines or conduits in, through or under the county roads of Clay County for the distribution of gas to the inhabitants along these roads, and for the transportation of other gas through Clay County, Missouri as set forth in the order of that Court dated August 21, 1930. The Central West Utility has succeeded to the rights and privileges granted under said order.

The Missouri Public Service Commission granted a Certificate of Convenience and Necessity covering this area of Clay County to the Central West Utility Company in case No. 9771 dated August 17, 1939.

Local franchises are in effect as follows:

Liberty	Ordinance No. 1627,	Granted Sept. 1, 1944,	Term 10 years
Smithville	Ordinance No. 151,	Granted Mar. 3, 1950,	Term 20 years
Glenaire	Ordinance No. 5,	Granted May 14, 1951,	Term 20 years
Claycomo	Ordinance No. 8,	Granted Jan. 25, 1949,	Term 10 years

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Sheet 23 of 113

PANHANDLE EASTERN PIPE LINE COMPANY

Market Data
Number of Customers by Classes of Service
Missouri Power & Light Company (Name of Purchaser)
Excelsior Springs, Missouri (Distribution System)

(A)	Customer Classification (B)	As of January 1st Actual 1951 (C)	1952 (D)	1953 (E)	Estimated 1954 (F)
	Residential				
1.	Non-Heating	556	359	301	279
2.	Space-Heating	420	659	806	883
3.	Total Residential	976	1 018	1 107	1 162
	Commercial				
4.	Non-Heating	168	146	134	131
5.	Space-Heating	157	187	203	207
6.	Total Commercial	325	333	337	338
7.	Firm Industrial	0	0	0	0
8.	Interruptible Industrial	0	0	0	0
9.	Other Customers	0	0	0	0
10.	Total Customers	1 301	1 351	1 444	1 500

		As of January 1st Estimated 1955 (G)	1956 (H)	1957 (I)	1958 (J)
	Residential				
11.	Non-Heating	272	268	235	222
12.	Space-Heating	930	984	1 068	1 132
13.	Total Residential	1 202	1 252	1 303	1 354
	Commercial				
14.	Non-Heating	128	118	108	98
15.	Space-Heating	220	236	252	268
16.	Total Commercial	348	354	360	366
17.	Firm Industrial	0	0	0	0
18.	Interruptible Industrial	0	0	0	0
19.	Other Customers	0	0	0	0
20.	Total Customers	1 550	1 606	1 663	1 720

PANHANDLE EASTERN PIPE LINE COMPANY

Market Data
Annual Gas Requirements by Classes of Service
Missouri Power & Light Company (Name of Purchaser)
Excelsior Springs, Missouri (Distribution System)

	Annual Gas Requirements (B)	MCF (Millions of Cu. Ft.) at 14.73 psia							
		Actual			Estimated				
		1950 (C)	1951 (D)	1952 (E)	1953 (F)	1954 (G)	1955 (H)	1956 (I)	1957 (J)
	Sales								
	Residential								
1.	Non-Heating	26.880	19.695	12.668	11.160	10.064	8.308	7.285	6.860
2.	Space-Heating	74.513	110.108	132.111	141.280	148.800	152.520	165.555	169.600
3.	Total Residential	101.393	129.803	144.779	152.440	158.864	160.828	172.840	176.460
	Commercial								
4.	Non-Heating	28.800	23.617	21.968	21.615	21.760	20.650	19.440	18.130
5.	Space-Heating	113.380	175.333	176.491	172.845	176.000	180.540	183.960	187.600
6.	Total Commercial	141.980	198.950	198.459	194.460	197.760	201.190	203.400	205.730
7.	Firm Industrial	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8.	Interruptible Industrial	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9.	Other Sales	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10.	Total Sales	243.373	328.753	343.238	346.900	356.624	362.018	376.240	382.190
11.	Company Use and Unaccounted-For	26.599	6.383	8.051	8.673	8.916	9.050	9.406	9.555
12.	Total Send-Out	269.972	335.136	351.289	355.573	365.540	371.068	385.646	391.745
	Curtailments								
13.	Firm Industrial	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14.	Interruptible Industrial	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15.	Other	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16.	Total Curtailments	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17.	Total Annual Gas Requirements	269.972	335.136	351.289	355.573	365.540	371.068	385.646	391.745

PANHANDLE EASTERN PIPE LINE COMPANY

Market Data

Peak Day Gas Requirements by Classes of Service

Missouri Power & Light Company (Name of Purchaser)

Excelsior Springs, Missouri (Distribution System)

MCF (Thousands of Cu. Ft.) @ 14.73 psia

(A)	Peak Day Gas Requirements (*) (B)	Actual 1950-51 (C)	Actual 1951-52 (D)	Actual 1952-53 (E)	Estimated 1953-54 (F)	Estimated 1954-55 (G)	Estimated 1955-56 (H)	Estimated 1956-57 (I)	Estimated 1957-58 (J)
	Sales								
	Residential								
1.	Non-Heating	91	70	43	40	39	38	33	32
2.	Space-Heating	746	1 136	1 185	1 722	1 814	1 919	2 083	2 207
3.	Total Residential	837	1 206	1 228	1 762	1 853	1 957	2 116	2 239
	Commercial								
4.	Non-Heating	76	41	85	83	81	75	69	62
5.	Space-Heating	1 069	1 143	1 144	1 547	1 645	1 720	1 837	1 954
6.	Total Commercial	1 145	1 184	1 229	1 630	1 726	1 795	1 906	2 016
7.	Firm Industrial	0	0	0	0	0	0	0	0
8.	Interruptible Industrial	0	0	0	0	0	0	0	0
9.	Other Sales	0	0	0	0	0	0	0	0
10.	Total Sales	1 982	2 390	2 457	3 392	3 579	3 752	4 022	4 255
11.	Increase in Holder Stock	0	0	0	0	0	0	0	0
12.	Company Use and Unaccounted-For	61	74	98	136	143	150	161	170
13.	Total Send-Out	2 043	2 464	2 555	3 528	3 722	3 902	4 183	4 425
	Curtailments								
14.	Firm Industrial	0	0	0	0	0	0	0	0
15.	Interruptible Industrial	0	0	0	0	0	0	0	0
16.	Other	0	0	0	0	0	0	0	0
17.	Total Curtailments	0	0	0	0	0	0	0	0
18.	Total Peak Day Gas Requirements	2 043	2 464	2 555	3 528	3 722	3 902	4 183	4 425
19.	Date	2-1-51	12-15-51	1-16-53					
20.	Mean Temperature	-2	3	16	0	0	0	0	0

Note: (*) Day of Maximum send-out of firm gas.

PANHANDLE EASTERN PIPE LINE COMPANY

Market Data
Annual Gas Supply

Missouri Power & Light Company (Name of Purchaser)
Excelsior Springs, Missouri (Distribution System)

MMCF (Millions of Cu. Ft.) at 14.73 psia

(A)	Annual Gas Supply (B)	Actual 1950 (C)	1951 (D)	1952 (E)	Estimated 1953 (F)	1954 (G)	1955 (H)	1956 (I)	1957 (J)
	Natural Gas Purchases								
	Pipe Line Companies								
1.	P.E.P.L. Co.	269.972	335.136	351.289	355.573	365.540	371.068	385.646	391.745
2.									
3.	Other Sources	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4.	Total Natural Gas Purchases	269.972	335.136	351.289	355.573	365.540	371.068	385.646	391.745
5.	Natural Gas Production - Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6.	From Underground Storage	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7.	From Holders and Line Pack	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8.	Total Natural Gas Supply	269.972	335.136	351.289	355.573	365.540	371.068	385.646	391.745
	Manufactured Gas								
9.	Purchases	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10.	Production								
11.	Water Gas, Oil Gas, etc.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12.	Liquefied Petroleum Gas	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13.	Total Manufactured Gas	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14.	Total Annual Gas Supply	269.972	335.136	351.289	355.573	365.540	371.068	385.646	391.745

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Exhibit X-14
Sheet 2 of 8

PANHANDLE EASTERN PIPE LINE COMPANY

Market Data
Number of Customers by Classes of Service
Central Illinois Electric and Gas Co. (Name of Purchaser)
Lincoln (Distribution System)

(A)	Customer Classification (B)	As of January 1st Actual 1951 (C)	Actual 1952 (D)	Actual 1953 (E)	Estimated 1954 (F)
	Residential				
1.	Non-Heating	1,757	1,621	1,184	950
2.	Space-Heating	588	771	1,442	1,900
3.	Total Residential	2,345	2,392	2,626	2,850
	Commercial				
4.	Non-Heating	127	123	125	130
5.	Space-Heating	91	95	127	165
6.	Total Commercial	218	218	252	295
7.	Firm Industrial	1	1	2	2
8.	Interruptible Industrial	2	2	2	2
9.	Other Customers				
10.	Total Customers	2,566	2,613	2,882	3,149

		As of January 1st Estimated 1955 (G)	Estimated 1956 (H)	Estimated 1957 (I)	Estimated 1958 (J)
	Residential				
11.	Non-Heating	800	680	510	325
12.	Space-Heating	2,200	2,400	2,650	2,915
13.	Total Residential	3,000	3,080	3,160	3,240
	Commercial				
14.	Non-Heating	125	125	130	135
15.	Space-Heating	175	185	189	189
16.	Total Commercial	300	310	320	330
17.	Firm Industrial	2	2	2	2
18.	Interruptible Industrial	2	2	2	2
19.	Other Customers				
20.	Total Customers	3,304	3,394	3,484	3,574

PANHANDLE EASTERN PIPE LINE COMPANY

Market Data
Annual Gas Requirements by Classes of Service
Central Illinois Electric and Gas Co. (Name of Purchaser)
Lincoln (Distribution System)

MMCF (Millions of Cu. Ft.) @ 14.73 psia

(A)	Annual Gas Requirements (B)	Actual 1950 (C)	1951 (D)	1952 (E)	Estimated 1953 (F)	1954 (G)	1955 (H)	1956 (I)	1957 (J)
	Sales								
	Residential								
1.	Non-Heating	38	33	33	26	20	17	13	8
2.	Space-Heating	100	151	205	285	330	360	398	437
3.	Total Residential	138	183	238	311	350	377	411	445
	Commercial								
4.	Non-Heating	20	22	30	35	35	38	42	46
5.	Space-Heating	24	33	37	42	45	72	94	112
6.	Total Commercial	44	55	67	77	80	110	136	158
7.	Firm Industrial	126	139	117	120	250	280	310	330
8.	Interruptible Industrial (1)	420	497	387	440	440	440	440	440
9.	Other Sales								
10.	Total Sales	728	874	809	948	1,120	1,207	1,297	1,373
11.	Company Use and Unaccounted-For	37	13	42	25	30	33	38	47
12.	Total Send-Out	765	887	851	973	1,150	1,240	1,335	1,420
	Curtailments								
13.	Firm Industrial	None							
14.	Interruptible Industrial (1)	Not Significant							
15.	Other	None							
16.	Total Curtailments								
17.	Total Annual Gas Requirements								

(1) No interruptible purchases from Panhandle

PANHANDLE EASTERN PIPE LINE COMPANY

Market Data
Peak Day Gas Requirements by Classes of Service
Central Illinois Electric and Gas Co. (Name of Purchaser)
Lincoln (Distribution System)

MCF (Thousands of Cu. Ft.) @ 14.73 psia

(A)	Peak Day Gas Requirements (*) (B)	Actual 1950-51 (C)	1951-52 (D)	1952-53 (E)	Estimated 1953-54 (F)	1954-55 (G)	1955-56 (H)	1956-57 (I)	1957-58 (J)
	Sales								
	Residential								
1.	Non-Heating	149	Breakdown	100	80	68	58	43	28
2.	Space-Heating	1,126		2,206	3,800	4,400	4,800	5,300	5,830
3.	Total Residential	1,275	not	2,306	3,880	4,468	4,858	5,343	5,858
	Commercial								
4.	Non-Heating	61	Available	60	62	60	60	72	81
5.	Space-Heating	250		325	550	585	740	907	982
6.	Total Commercial	311		385	612	645	800	979	1,063
7.	Firm Industrial	607		499	800	950	1,100	1,300	1,500
8.	Interruptible Industrial (1)	465		1,136	650				
9.	Other Sales								
10.	Total Sales	2,658		4,326	5,942	6,063	6,758	7,622	8,421
11.	Increase in Holder Stock								
12.	Company Use and Unaccounted-For	162		108	108	107	152	163	179
13.	Total Send-Out	2,820	3,684	4,434	6,050	6,170	6,910	7,785	8,600
	Curtailments								
14.	Firm Industrial								
15.	Interruptible Industrial (1)				650	1,300	1,300	1,300	1,300
16.	Other								
17.	Total Curtailments				650	1,300	1,300	1,300	1,300
18.	Total Peak Day Gas Requirements	2,820		4,434	6,700	7,470	8,210	9,085	9,900
19.	Date	1-29-51	12-14-51	1-6-53					
20.	Mean Temperature			14.5°	0°	0°	0°	0°	0°

(1) No Interruptible purchase from Panhandle.
Note: (*) Day of Maximum send-out of firm gas.

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PANHANDLE EASTERN PIPE LINE COMPANY

Market Data
Annual Gas Supply

Central Illinois Electric and Gas Co. (Name of Purchaser)
Lincoln (Distribution System)

MMCF (Millions of Cu. Ft.) @ 14.73 psia

(A)	Annual Gas Supply (B)	Actual 1950 (C)	1951 (D)	1952 (E)	Estimated 1953 (F)	1954 (G)	1955 (H)	1956 (I)	1957 (J)
	Natural Gas Purchases								
1.	Pipe Line Companies P.E.P.L. Co.	765	887	851	973	1,150	1,240	1,335	1,420
2.									
3.	Other Sources								
4.	Total Natural Gas Purchases								
5.	Natural Gas Production - Total								
6.	From Underground Storage								
7.	From Holders and Line Pack								
8.	Total Natural Gas Supply	765	887	851	973	1,150	1,240	1,335	1,420
	Manufactured Gas								
9.	Purchases								
10.	Production								
11.	Water Gas, Oil Gas, etc.								
12.	Liquefied Petroleum Gas								
13.	Total Manufactured Gas								
14.	Total Annual Gas Supply	765	887	851	973	1,150	1,240	1,335	1,420

Exhibit X-14
Sheet 9 of 22

PANHANDLE EASTERN PIPE LINE COMPANY

Market Data
Number of Customers by Classes of Service
CENTRAL ILLINOIS LIGHT COMPANY (Name of Purchaser)
PEORIA (Distribution System)

(A)	Customer Classification (B)	As of January 1st Actual 1951 (C)	1952 (D)	1953 (E)	Estimated 1954 (F)
	Residential				
1.	Non-Heating	36,267	30,408	24,732	23,500
2.	Space-Heating	12,658	20,000	27,359	29,150
3.	Total Residential	48,925	50,408	52,091	52,650
	Commercial				
4.	Non-Heating	2,428	2,399	2,227	2,190
5.	Space-Heating	815	1,400	2,131	2,260
6.	Total Commercial	3,243	3,799	4,358	4,450
7.	Firm Industrial	62	66	43	43
8.	Interruptible Industrial	3	6	8	9
9.	Other Customers	-	-	-	-
10.	Total Customers	52,233	54,279	56,500	57,152

		As of January 1st Estimated 1955 (G)	1956 (H)	1957 (I)	1958 (J)
	Residential				
11.	Non-Heating	22,200	20,090	17,705	15,107
12.	Space-Heating	32,230	36,240	40,725	45,323
13.	Total Residential	54,430	56,430	58,430	60,430
	Commercial				
14.	Non-Heating	1,750	1,733	1,709	1,687
15.	Space-Heating	2,770	2,887	3,011	3,133
16.	Total Commercial	4,520	4,620	4,720	4,820
17.	Firm Industrial	44	45	46	47
18.	Interruptible Industrial	10	10	11	11
19.	Other Customers	-	-	-	-
20.	Total Customers	59,004	61,105	63,207	65,308

PANHANDLE EASTERN PIPE LINE COMPANY

Market Data
Annual Gas Requirements by Classes of Service
CENTRAL ILLINOIS LIGHT COMPANY (Name of Purchaser)
PEORIA (Distribution System)

MMCF (Millions of Cu. Ft.) @ 14.73 psia

Annual Gas Requirements (B)	Actual 1950 (C)	Actual 1951 (D)	Actual 1952 (E)	Estimated 1953 (F)	Estimated 1954 (G)	Estimated 1955 (H)	Estimated 1956 (I)	Estimated 1957 (J)
Sales								
Residential								
Non-Heating	911.18	863.44	707.40	615.00	587.00	555.00	502.00	442.00
Space-Heating	1,921.22	3,193.88	4,112.93	4,915.00	5,596.00	6,188.00	6,977.00	7,819.00
Total Residential	2,832.40	4,057.32	4,820.33	5,530.00	6,183.00	6,743.00	7,479.00	8,261.00
Commercial								
Non-Heating	285.77	329.43	335.09	342.00	359.00	376.00	390.00	405.00
Space-Heating	252.56	348.30	570.94	805.00	887.00	969.00	1,010.00	1,053.00
Total Commercial	538.33	677.73	906.03	1,147.00	1,246.00	1,345.00	1,400.00	1,458.00
Firm Industrial	498.08	671.26	695.54	845.00	929.00	1,022.00	1,124.00	1,237.00
Interruptible Industrial	3,891.11	4,014.32	4,724.57	5,600.00	5,880.00	6,174.00	6,482.00	6,806.00
Other Sales								
Total Sales	7,759.92	9,420.63	11,146.47	13,122.00	14,238.00	15,284.00	16,485.00	17,762.00
Company Use and Unaccounted-For	451.02	478.84	757.43	450.00	472.00	496.00	520.00	546.00
Total Send-Out	8,210.94	9,899.47	11,903.90	13,572.00	14,710.00	15,780.00	17,005.00	18,308.00
Curtailments								
Firm Industrial								
Interruptible Industrial	215.89	185.03		40.00	150.00			200.00
Other								
Total Curtailments	215.89	185.03		40.00	150.00			200.00
Total Annual Gas Requirements	8,426.83	10,084.50	11,903.90	13,612.00	14,860.00	15,780.00	17,005.00	18,508.00

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PANHANDLE EASTERN PIPE LINE COMPANY

Market Data
Peak Day Gas Requirements by Classes of Service
CENTRAL ILLINOIS LIGHT COMPANY (Name of Purchaser)
PEORIA (Distribution System)

(A)		MCF (Thousands of Cu. Ft.) @ 14.73 psia							
	Peak Day Gas Requirements (*) (B)	Actual			Estimated				
		1950-51 (C)	1951-52 (D)	1952-53 (E)	1953-54 (F)	1954-55 (G)	1955-56 (H)	1956-57 (I)	1957-58 (J)
	Sales								
	Residential								
1.	Non-Heating	2,970	2,490	2,030	1,930	1,820	1,650	1,450	1,240
2.	Space-Heating	24,960	30,190	35,580	48,240	53,340	60,180	67,340	75,020
3.	Total Residential	27,930	32,680	37,610	50,170	55,160	61,830	68,790	76,260
	Commercial								
4.	Non-Heating	1,440	1,420	1,320	1,300	1,040	1,030	1,010	1,000
5.	Space-Heating	2,930	4,380	6,110	7,660	9,370	9,770	10,170	10,610
6.	Total Commercial	4,370	5,800	7,430	8,960	10,410	10,800	11,180	11,610
7.	Firm Industrial	2,960	3,110	3,180	3,130	3,260	3,330	3,400	3,480
8.	Interruptible Industrial	1,776	14,199	8,224	2,000	17,000	18,000	19,000	20,000
9.	Other Sales								
10.	Total Sales	37,036	55,789	56,444	64,310	85,830	93,960	102,370	111,350
11.	Increase in Holder Stock								
12.	Company Use and Unaccounted-For	1,775	2,068	1,743	3,200	4,290	4,700	5,120	5,570
13.	Total Send-Out	38,811	57,857	58,187	67,510	90,120	98,660	107,490	116,920
	Curtailments								
14.	Firm Industrial								
15.	Interruptible Industrial	11,224	-	8,465	11,800	-	-	-	-
16.	Other								
17.	Total Curtailments	11,224	-	8,465	11,800	-	-	-	-
18.	Total Peak Day Gas Requirements	50,035	57,857	66,652	79,310	90,120	98,660	107,490	116,920
19.	Date	1-29-51	1-28-52	1-6-53					
20.	Mean Temperature	-5°	6°	12°	0°	0°	0°	0°	0°

Note: (*) Day of Maximum send-out of firm gas.

PANHANDLE EASTERN PIPE LINE COMPANY

Market Data
Annual Gas Supply

CENTRAL ILLINOIS LIGHT COMPANY (Name of Purchaser)
PEORIA (Distribution System)

MMCF (Millions of Cu. Ft.) @ 14.73 psia

(A)	Annual Gas Supply (B)	Actual 1950 (C)	1951 (D)	1952 (E)	Estimated 1953 (F)	1954 (G)	1955 (H)	1956 (I)	1957 (J)
	Natural Gas Purchases								
1.	Pipe Line Companies P.E.P.L. Co.	8,210.94	9,899.47	11,903.90	13,572.00	14,710.00	15,780.00	17,005.00	18,308.00
2.									
3.	Other Sources								
4.	Total Natural Gas Purchases								
5.	Natural Gas Production - Total								
6.	From Underground Storage								
7.	From Holders and Line Pack								
8.	Total Natural Gas Supply	8,210.94	9,899.47	11,903.90	13,572.00	14,710.00	15,780.00	17,005.00	18,308.00
	Manufactured Gas								
9.	Purchases								
10.	Production								
11.	Water Gas, Oil Gas, etc.								
12.	Liquefied Petroleum Gas	215.89	185.03	-	40.00	150.00	-	-	200.00
13.	Total Manufactured Gas	215.89	185.03	-	40.00	150.00	-	-	200.00
14.	Total Annual Gas Supply	8,426.83	10,084.50	11,903.90	13,612.00	14,860.00	15,780.00	17,005.00	18,508.00

Exhibit X-14
Sheet 16 of 22

PANHANDLE EASTERN PIPE LINE COMPANY

Market Data
Number of Customers by Classes of Service
CENTRAL ILLINOIS LIGHT COMPANY (Name of Purchaser)
SPRINGFIELD (Distribution System)

(A)	Customer Classification (B)	As of January 1st Actual 1951 (C)	1952 (D)	1953 (E)	Estimated 1954 (F)
	Residential				
1.	Non-Heating	15,779	13,578	10,198	9,620
2.	Space-Heating	7,792	10,981	15,770	16,720
3.	Total Residential	23,571	24,559	25,968	26,340
	Commercial				
4.	Non-Heating	1,005	943	970	1,000
5.	Space-Heating	328	416	697	745
6.	Total Commercial	1,333	1,359	1,667	1,745
7.	Firm Industrial	15	16	9	9
8.	Interruptible Industrial	-	-	4	6
9.	Other Customers	-	-	-	-
10.	Total Customers	24,919	25,934	27,648	28,100

		As of January 1st Estimated 1955 (G)	1956 (H)	1957 (I)	1958 (J)
	Residential				
11.	Non-Heating	9,000	8,500	8,000	7,500
12.	Space-Heating	18,140	19,640	21,140	22,640
13.	Total Residential	27,140	28,140	29,140	30,140
	Commercial				
14.	Non-Heating	750	729	704	675
15.	Space-Heating	1,030	1,101	1,176	1,255
16.	Total Commercial	1,780	1,830	1,880	1,930
17.	Firm Industrial	9	10	11	12
18.	Interruptible Industrial	6	6	7	7
19.	Other Customers	-	-	-	-
20.	Total Customers	28,935	29,986	31,038	32,089

PANHANDLE EASTERN PIPE LINE COMPANY

Market Data
Annual Gas Requirements by Classes of Service
CENTRAL ILLINOIS LIGHT COMPANY (Name of Purchaser)
SPRINGFIELD (Distribution System)

MMCF (Millions of Cu. Ft.) @ 14.73 psia

(A)	Annual Gas Requirements (B)	Actual 1950 (C)	Actual 1951 (D)	Actual 1952 (E)	Estimated 1953 (F)	Estimated 1954 (G)	Estimated 1955 (H)	Estimated 1956 (I)	Estimated 1957 (J)
	Sales								
	Residential								
1.	Non-Heating	425.63	415.12	341.62	275.00	269.00	252.00	238.00	224.00
2.	Space-Heating	1,251.99	1,758.93	2,393.46	2,855.00	3,176.00	3,446.00	3,731.00	4,016.00
3.	Total Residential	1,677.62	2,174.05	2,735.08	3,130.00	3,445.00	3,698.00	3,969.00	4,240.00
	Commercial								
4.	Non-Heating	146.84	171.82	185.41	203.00	211.00	166.00	169.00	172.00
5.	Space-Heating	121.19	153.75	238.55	345.00	388.00	432.00	462.00	494.00
6.	Total Commercial	268.03	325.57	423.96	548.00	599.00	598.00	631.00	666.00
7.	Firm Industrial	419.69	450.49	268.74	352.00	380.00	418.00	460.00	506.00
8.	Interruptible Industrial	-	43.23	305.07	480.00	600.00	750.00	900.00	1,200.00
9.	Other Sales								
10.	Total Sales	2,365.34	2,993.34	3,732.85	4,510.00	5,024.00	5,464.00	5,960.00	6,612.00
11.	Company Use and Unaccounted-For	217.12	211.06	351.75	250.00	262.00	275.00	289.00	303.00
12.	Total Send-Out	2,582.46	3,204.40	4,084.60	4,760.00	5,286.00	5,739.00	6,249.00	6,915.00
	Curtailments								
13.	Firm Industrial								
14.	Interruptible Industrial				10.00	30.00			50.00
15.	Other								
16.	Total Curtailments				10.00	30.00			50.00
17.	Total Annual Gas Requirements	2,582.46	3,204.40	4,084.60	4,770.00	5,316.00	5,739.00	6,249.00	6,965.00

PANHANDLE EASTERN PIPE LINE COMPANY

Market Data

Peak Day Gas Requirements by Classes of Service

CENTRAL ILLINOIS LIGHT COMPANY (Name of Purchaser)
SPRINGFIELD (Distribution System)

MCF (Thousands of Cu. Ft.) @ 14.73 psia

(A)	Peak Day Gas Requirements (*) (B)	Actual 1950-51 (C)	Actual 1951-52 (D)	Actual 1952-53 (E)	Estimated 1953-54 (F)	Estimated 1954-55 (G)	Estimated 1955-56 (H)	Estimated 1956-57 (I)	Estimated 1957-58 (J)
	Sales								
	Residential								
1.	Non-Heating	1,435	1,230	930	870	820	770	730	680
2.	Space-Heating	14,600	16,820	21,640	30,540	34,130	35,875	38,610	41,320
3.	Total Residential	16,035	18,050	22,570	31,410	34,950	36,645	39,340	42,000
	Commercial								
4.	Non-Heating	710	660	680	710	530	515	500	480
5.	Space-Heating	1,660	1,770	2,700	3,720	5,150	5,500	5,870	6,270
6.	Total Commercial	2,370	2,430	3,380	4,430	5,680	6,015	6,370	6,750
7.	Firm Industrial	480	540	540	540	540	600	660	720
8.	Interruptible Industrial	-	-	330	500	2,000	3,000	4,000	5,000
9.	Other Sales								
10.	Total Sales	18,885	21,020	26,820	36,880	43,170	46,260	50,370	54,470
11.	Increase in Holder Stock								
12.	Company Use and Unaccounted-For	758	901	1,551	1,840	2,160	2,310	2,520	2,730
13.	Total Send-Out	19,643	21,921	28,371	38,720	45,330	48,570	52,890	57,200
	Curtailments								
14.	Firm Industrial								
15.	Interruptible Industrial			270	1,500				
16.	Other								
17.	Total Curtailments			270	1,500				
18.	Total Peak Day Gas Requirements	19,643	21,921	28,641	40,220	45,330	48,570	52,890	57,200
19.	Date	1-29-51	1-28-52	1-6-53					
20.	Mean Temperature	-1°	11°	17°	0°	0°	0°	0°	0°

Note: (*) Day of Maximum send-out of firm gas.

(15667)

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Sheet 9 of 57

PANHANDLE EASTERN PIPE LINE COMPANY

Market Data
Number of Customers by Classes of Service
Central Ill. Public Serv. Co. (Name of Purchaser)
Canton (Distribution System)

(A)	Customer Classification (B)	As of January 1st Actual 1951 (C)	1952 (D)	1953 (E)	Estimated 1954 (F)
	Residential				
1.	Non-Heating	6,034	5,849	5,892	6,019
2.	Space-Heating	950	1,197	1,250	1,238
3.	Total Residential	6,984	7,046	7,142	7,257
	Commercial				
4.	Non-Heating	466	453	439	441
5.	Space-Heating	197	190	195	202
6.	Total Commercial	663	643	634	643
7.	Firm Industrial	4	5	2	1
8.	Interruptible Industrial	1*	1*	4	7
9.	Other Customers		59**	111**	145**
10.	Total Customers	4,268	7,754	7,893	8,053

		As of January 1st Estimated 1955 (G)	1956 (H)	1957 (I)	1958 (J)
	Residential				
11.	Non-Heating	3,810	3,353	3,050	2,756
12.	Space-Heating	3,647	4,241	4,662	5,062
13.	Total Residential	7,457	7,594	7,712	7,818
	Commercial				
14.	Non-Heating	448	459	470	481
15.	Space-Heating	210	242	299	306
16.	Total Commercial	658	701	769	787
17.	Firm Industrial	1	1	1	2
18.	Interruptible Industrial	8	9	10	11
19.	Other Customers	100**	63**	8**	3**
20.	Total Customers	8,224	8,368	8,500	8,621

* Int. Harv.
** 3/0 Comb. Res. & Com.

PANHANDLE EASTERN PIPE LINE COMPANY

Market Data
Annual Gas Requirements by Classes of Service
Central Ill. Public Service Co. (Name of Purchaser)
Canton (Distribution System)

MMCF (Millions of Cu. Ft.) @ 14.73 psia

(A)	Annual Gas Requirements (B)	Actual 1950 (C)	Actual 1951 (D)	Actual 1952 (E)	Estimated 1953 (F)	Estimated 1954 (G)	Estimated 1955 (H)	Estimated 1956 (I)	Estimated 1957 (J)
	Sales								
	Residential								
1.	Non-Heating	121.9	129.1	125.2	127.6	80.8	71.1	64.7	58.4
2.	Space-Heating	189.2	202.4	254.0	228.8	673.9	783.7	861.5	935.4
3.	Total Residential	311.1	331.5	379.2	356.4	754.7	854.8	926.2	993.8
	Commercial								
4.	Non-Heating	55.7	57.4	48.7	52.5	53.3	54.6	55.9	57.2
5.	Space-Heating	76.9	78.3	80.5	115.4	119.9	138.3	170.8	174.8
6.	Total Commercial	132.6	135.7	129.2	167.9	173.2	192.9	226.7	232.0
7.	Firm Industrial	66.6	97.6	40.4	26.3	31.5	31.5	31.5	63.0
8.	Interruptible Industrial	432.2	405.8	502.1	482.5	606.5	682.4	758.2	834.0
9.	Other Sales		36.0*	43.3*	64.0*	55.0*	39.1*	5.1*	1.9*
10.	Total Sales	942.5	1,006.6	1,094.2	1,097.1	1,620.9	1,800.7	1,947.7	2,124.7
11.	Company Use and Unaccounted-For	87.2	94.8	95.4	32.2	74.5	74.5	74.5	74.5
12.	Total Send-Out	1,029.7	1,101.4	1,189.6	1,129.3	1,695.4	1,875.2	2,022.2	2,199.2
	Curtailments								
13.	Firm Industrial	x	x	x	x	x	x	x	x
14.	Interruptible Industrial								
15.	Other								
16.	Total Curtailments	x	x	x	x	x	x	x	x
17.	Total Annual Gas Requirements	1,029.7	1,101.4	1,189.6	1,129.3	1,695.4	1,875.2	2,022.2	2,199.2

* G/O Comb. Res. & Com.

PANHANDLE EASTERN PIPE LINE COMPANY

Market Data
Peak Day Gas Requirements by Classes of Service
Central Ill. Public Serv. Co. (Name of Purchaser)
Canton (Distribution System)

MCF (Thousands of Cu. Ft.) @ 14.73 psia

(A)	Peak Day Gas Requirements (*) (B)	Actual 1950-51 (C)	1951-52 (D)	1952-53 (E)	1953-54 (F)	1954-55 (G)	Estimated 1955-56 (H)	1956-57 (I)	1957-58 (J)
	Sales								
	Residential								
1.	Non-Heating	392	380	382	391	247	218	198	179
2.	Space-Heating	1,966	1,831	1,725	2,525	7,440	8,652	9,510	10,326
3.	Total Residential	2,358	2,211	2,107	2,916	7,687	8,870	9,708	10,505
	Commercial								
4.	Non-Heating	200	194	188	189	193	197	202	207
5.	Space-Heating	827	592	549	836	869	1,002	1,238	1,267
6.	Total Commercial	1,027	786	737	1,025	1,062	1,199	1,440	1,474
7.	Firm Industrial	197	399	213	57	67	67	67	134
8.	Interruptible Industrial	70	1,870	1,916	2,312	3,007	3,383	3,759	4,135
9.	Other Sales	-	-	310	-	-	-	-	-
10.	Total Sales	3,652	5,266	5,283	6,310	11,823	13,519	14,974	16,248
11.	Increase in Holder Stock								
12.	Company Use and Unaccounted-For	74	426	240	300	400	400	400	400
13.	Total Send-Out	3,726	5,692	5,523	6,610	12,223	13,919	15,374	16,648
	Curtailments								
14.	Firm Industrial	110	16	x	x	x	x	x	x
15.	Interruptible Industrial	1,716	x	x	x	x	x	x	x
16.	Other	x	x	x	x	x	x	x	x
17.	Total Curtailments	1,826	16	x	x	x	x	x	x
18.	Total Peak Day Gas Requirements	5,552	5,708	5,523	6,610	12,223	13,919	15,374	16,648
19.	Date	2-1-51	1-28-52	1-5-53	x	x	x	x	x
20.	Mean Temperature	-1°	17°	22°	0°	0°	0°	0°	0°

Note: (*) Day of Maximum send-out of firm gas.

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(15682)

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PANHANDLE EASTERN PIPE LINE COMPANY

Market Data
Annual Gas Supply

Central Ill. Public Service Co. (Name of Purchaser)
Canton (Distribution System)

MMCF (Millions of Cu. Ft.) @ 14.73 psia

(A)	Annual Gas Supply (B)	Actual 1950 (C)	Actual 1951 (D)	Actual 1952 (E)	Estimated 1953 (F)	Estimated 1954 (G)	Estimated 1955 (H)	Estimated 1956 (I)	Estimated 1957 (J)
	Natural Gas Purchases								
	Pipe Line Companies								
1.	P.E.P.L. Co.	1,029.7	1,101.4	1,189.6	1,129.3	1,695.4	1,875.2	2,022.2	2,199.2
2.									
3.	Other Sources								
4.	Total Natural Gas Purchases	1,029.7	1,101.4	1,189.6	1,129.3	1,695.4	1,875.2	2,022.2	2,199.2
5.	Natural Gas Production - Total								
6.	From Underground Storage	x	x	x	x	x	x	x	x
7.	From Holders and Line Pack								
8.	Total Natural Gas Supply	1,029.7	1,101.4	1,189.6	1,129.3	1,695.4	1,875.2	2,022.2	2,199.2
	Manufactured Gas								
9.	Purchases								
10.	Production								
11.	Water Gas, Oil Gas, etc.	x	x	x	x	x	x	x	x
12.	Liquefied Petroleum Gas								
13.	Total Manufactured Gas								
14.	Total Annual Gas Supply	1,029.7	1,101.4	1,189.6	1,129.3	1,695.4	1,875.2	2,022.2	2,199.2

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Exhibit X-16
Sheet 9 of 50

PANHANDLE EASTERN PIPE LINE COMPANY

Market Data
Number of Customers by Classes of Service
Citizens Gas Company (Name of Purchaser)
Arthur, Illinois (Distribution System)

(A)	Customer Classification (B)	As of January 1st Actual 1951 (C)	Actual 1952 (D)	Actual 1953 (E)	Estimated 1954 (F)
	Residential				
1.	Non-Heating	104	104	104	124
2.	Space-Heating	362	370	392	392
3.	Total Residential	466	474	496	516
	Commercial				
4.	Non-Heating	4	3	5	6
5.	Space-Heating	55	61	66	66
6.	Total Commercial	59	64	71	72
7.	Firm Industrial	1	2	2	2
8.	Interruptible Industrial			1 (Inst.)	1 (Inst.)
9.	Other Customers		1 (Inst.)	10 (G.G.) *	20 (G.G.) *
10.	Total Customers	526	541	580	611

*Dual Fuel for Heating

		As of January 1st Estimated 1955 (G)	Estimated 1956 (H)	Estimated 1957 (I)	Estimated 1958 (J)
	Residential				
11.	Non-Heating	129	109	98	98
12.	Space-Heating	443	483	496	508
13.	Total Residential	572	592	594	606
	Commercial				
14.	Non-Heating	7	5	5	5
15.	Space-Heating	68	73	78	78
16.	Total Commercial	75	78	83	83
17.	Firm Industrial	2	2	2	2
18.	Interruptible Industrial				
19.	Other Customers	2 (Inst.)	2 (Inst.)	2 (Inst.)	2 (Inst.)
20.	Total Customers	651	674	681	693

PANHANDLE EASTERN PIPE LINE COMPANY

Market Data
Annual Gas Requirements by Classes of Service
Citizens Gas Company (Name of Purchaser)
Arthur, Illinois (Distribution System)

MMCF (Millions of Cu. Ft.) @ 14.73 psia

(A)	Annual Gas Requirements (B)	Actual 1950 (C)	Actual 1951 (D)	Actual 1952 (E)	Estimated 1953 (F)	Estimated 1954 (G)	Estimated 1955 (H)	Estimated 1956 (I)	Estimated 1957 (J)
	Sales								
	Residential								
1.	Non-Heating	3937	2363	2313	2400	3844	3799	3379	3038
2.	Space-Heating	52,976	65,441	65,374	72,360	72,360	81,955	89,355	91,760
3.	Total Residential	56,913	67,804	67,687	74,760	76,204	85,954	92,734	94,798
	Commercial								
4.	Non-Heating	485	75	44	730	876	1,022	730	730
5.	Space-Heating	13,630	15,208	15,320	20,328	19,140	19,720	21,170	22,620
6.	Total Commercial	14,115	15,283	15,364	21,058	20,016	20,742	21,900	23,350
7.	Firm Industrial		7,974	11,725	12,000	12,000	12,000	12,000	12,000
8.	Interruptible Industrial								
9.	Other Sales (Inst.)		214	2,804	4,700	4,700	9,400	9,400	9,400
10.	Total Sales	71,028	91,275	97,560	112,518	112,920	128,096	136,034	139,548
11.	Company Use and Unaccounted-For	2,379	8,460	12,817	11,252	11,292	12,810	13,603	13,955
12.	Total Send-Out	73,407	99,735	110,397	123,770	124,212	141,906	149,637	153,503
	Curtailments								
13.	Firm Industrial								
14.	Interruptible Industrial								
15.	Other								
16.	Total Curtailments								
17.	Total Annual Gas Requirements	73,407	99,735	110,397	123,770	124,212	141,906	149,637	153,503

PANHANDLE EASTERN PIPE LINE COMPANY

Market Data

Peak Day Gas Requirements by Classes of Service

Citizens Gas Company (Name of Purchaser)

Arthur, Illinois (Distribution System)

MCF (Thousands of Cu. Ft.) @ 14.73 psia

(A)	Peak Day Gas Requirements (*) (B)	Actual 1950-51 (C)	Actual 1951-52 (D)	Actual 1952-53 (E)	Estimated 1953-54 (F)	Estimated 1954-55 (G)	Estimated 1955-56 (H)	Estimated 1956-57 (I)	Estimated 1957-58 (J)
	Sales								
	Residential								
1.	Non-Heating	8	8	8	12	13	11	10	10
2.	Space-Heating	526	489	480	588	708	773	794	813
3.	Total Residential	534	497	488	600	721	784	804	823
	Commercial								
4.	Non-Heating	2	2	2	2	3	2	2	2
5.	Space-Heating	130	126	121	165	170	183	195	196
6.	Total Commercial	132	128	123	167	173	185	197	198
7.	Firm Industrial	65	60	60	92	92	92	92	92
8.	Interruptible Industrial								
9.	Other Sales	44	44	36	47	94	94	94	94
10.	Total Sales	775	729	707	906	1,080	1,155	1,187	1,207
11.	Increase in Holder Stock								
12.	Company Use and Unaccounted-For	71	55	50	102	108	116	119	121
13.	Total Send-Out	846	784	757	1,008	1,188	1,271	1,306	1,328
	Curtailments								
14.	Firm Industrial								
15.	Interruptible Industrial								
16.	Other								
17.	Total Curtailments								
18.	Total Peak Day Gas Requirements	846	784	757	1,008	1,188	1,271	1,306	1,327
19.	Date	2-1-51	12-15-51	1-6-53					
20.	Mean Temperature	-1°	-4°	15°					

Note: (*) Day of Maximum send-out of firm gas.

(15772)

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Exhibit X-16
Sheet 44 of 50

PANHANDLE EASTERN PIPE LINE COMPANY

Market Data
Number of Customers by Classes of Service
Citizens Gas Company (Name of Purchaser)
Villa Grove, Illinois (Distribution System)

(A)	Customer Classification (B)	As of January 1st Actual 1951 (C)	1952 (D)	1953 (E)	Estimated 1954 (F)
	Residential				
1.	Non-Heating	146	138	136	152
2.	Space-Heating	430	445	460	460
3.	Total Residential	576	583	596	612
	Commercial				
4.	Non-Heating	12	9	9	10
5.	Space-Heating	55	62	67	67
6.	Total Commercial	67	71	76	77
7.	Firm Industrial				
8.	Interruptible Industrial				
9.	Other Customers	1 (Inst.)	1 (Inst.)	1 (Inst.) 24 (G.G.)*	1 (Inst.) 24 (G.G.)*
10.	Total Customers	644	655	697	714

*Dual Fuel for Heating

		As of January 1st Estimated 1955 (G)	1956 (H)	1957 (I)	1958 (J)
	Residential				
11.	Non-Heating	157	127	127	127
12.	Space-Heating	499	529	539	544
13.	Total Residential	656	656	666	671
	Commercial				
14.	Non-Heating	10	10	10	10
15.	Space-Heating	70	78	86	86
16.	Total Commercial	80	88	96	96
17.	Firm Industrial				
18.	Interruptible Industrial				
19.	Other Customers	1 (Inst.)	1 (Inst.)	1 (Inst.)	1 (Inst.)
20.	Total Customers	737	745	763	768

Exhibit X-16
Sheet 45 of 50

PANHANDLE EASTERN PIPE LINE COMPANY

Market Data
Annual Gas Requirements by Classes of Service
Citizens Gas Company (Name of Purchaser)
Villa Grove, Illinois (Distribution System)

MMCF (Millions of Cu. Ft.) @ 14.73 psia

(A)	Annual Gas Requirements (B)	Actual 1950 (C)	Actual 1951 (D)	Actual 1952 (E)	Estimated 1953 (F)	Estimated 1954 (G)	Estimated 1955 (H)	Estimated 1956 (I)	Estimated 1957 (J)
	Sales								
	Residential								
1.	Non-Heating	6,014	4,040	3,5[illegible]	4,216	4,712	4,867	3,937	3,937
2.	Space-Heating	69,762	77,605	78,3[illegible]	85,100	85,100	92,315	97,865	99,715
3.	Total Residential	75,776	81,645	81,857	89,316	89,812	97,182	101,802	103,652
	Commercial								
4.	Non-Heating	1,358	1,137	1,065	1,314	1,460	1,460	1,460	1,460
5.	Space-Heating	14,500	22,424	20,968	19,430	19,430	20,300	22,620	24,940
6.	Total Commercial	15,858	23,561	22,023	20,744	20,890	21,760	24,080	26,400
7.	Firm Industrial								
8.	Interruptible Industrial								
9.	Other Sales (Inst.)		6,166	6,062	4,700	4,700	4,700	4,700	4,700
10.	Total Sales	91,634	111,372	109,942	114,760	115,402	123,642	130,582	134,752
11.	Company Use and Unaccounted-For	6,170	9,369	11,339	11,476	11,540	12,364	13,058	13,475
12.	Total Send-Out	97,804	120,741	121,281	126,236	126,942	136,006	143,640	148,227
	Curtailments								
13.	Firm Industrial								
14.	Interruptible Industrial								
15.	Other								5,473
16.	Total Curtailments								5,473
17.	Total Annual Gas Requirements	97,804	120,741	121,281	126,236	126,942	136,006	143,640	148,227

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PANHANDLE EASTERN PIPE LINE COMPANY

Market Data
Peak Day Gas Requirements by Classes of Service
Citizens Gas Company (Name of Purchaser)
Villa Grove, Illinois (Distribution System)

MCF (Thousands of Cu. Ft.) @ 14.73 psia

(A)	Peak Day Gas Requirements (*) (B)	Actual 1950-51 (C)	Actual 1951-52 (D)	Actual 1952-53 (E)	Estimated 1953-54 (F)	Estimated 1954-55 (G)	Estimated 1955-56 (H)	Estimated 1956-57 (I)	Estimated 1957-58 (J)
	Sales								
	Residential								
1.	Non-Heating	9	9	9	15	16	13	13	13
2.	Space-Heating	659	711	529	736	798	846	862	870
3.	Total Residential	668	720	538	751	804	859	875	883
	Commercial								
4.	Non-Heating	2	2	2	4	4	4	4	4
5.	Space-Heating	143	153	133	168	175	195	215	215
6.	Total Commercial	145	155	135	172	179	199	219	219
7.	Firm Industrial								
8.	Interruptible Industrial								
9.	Other Sales	44	44	44	47	47	47	47	47
10.	Total Sales	857	919	717	970	1,030	1,105	1,141	1,149
11.	Increase in Holder Stock								
12.	Company Use and Unaccounted-For	118	121	115	110	103	110	114	115
13.	Total Send-Out	975	1,040	832	1,080	1,133	1,215	1,255	1,264
	Curtailments								
14.	Firm Industrial								
15.	Interruptible Industrial								
16.	Other								
17.	Total Curtailments								
18.	Total Peak Day Gas Requirements	975	1,040	832	1,080	1,133	1,215	1,255	1,264
19.	Date	2-1-51	12-15-51	1-6-53					
20.	Mean Temperature	-1°	-4°	15°					

Note: (*) Day of Maximum send-out of firm gas.

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PANHANDLE EASTERN PIPE LINE COMPANY

Market Data

Basic Factors Used in Estimating Future Gas Requirements

ILLINOIS POWER COMPANY (Name of Purchaser)

Combined (Distribution System)

(A)	(B)	Annual (C)	Peak Day (D)
1.	Degree Day Deficiency	5446	65

		Actual			Estimated
		1950 (E)	1951 (F)	1952 (G)	1953 (H)
2.	Annual Load Factor of Purchaser	48%	43%	58%	63%

		Estimated			
		1954 (I)	1955 (J)	1956 (K)	1957 (L)
3.	Annual Load Factor of Purchaser	56%	58%	58%	59%

		Estimated Annual Use Per Customer - MCF				
	Customer Classification	1953 (M)	1954 (N)	1955 (O)	1956 (P)	1957 (Q)
	Residential					
4.	Non-Heating	26.0	27.0	28.0	29.0	29.0
5.	Space-Heating	206.0	206.0	206.0	206.0	206.0
	Commercial					
6.	Non-Heating	165.0	170.0	170.0	175.0	175.0
7.	Space-Heating	440.0	440.0	440.0	440.0	440.0
8.	Firm Industrial)	Estimated on basis of individual customers as load is				
9.	Intr. Industrial)	secured.				
10.						
11.						

		Estimated Peak Day Use Per Customer - MCF				
		1953-54 (R)	1954-55 (S)	1955-56 (T)	1956-57 (U)	1957-58 (V)
	Residential					
12.	Non-Heating	100.0	100.0	100.0	100.0	100.0
13.	Space-Heating	1900.0	1900.0	1900.0	1900.0	1900.0
	Commercial					
14.	Non-Heating	656.0	656.0	656.0	656.0	656.0
15.	Space-Heating	4030.0	4030.0	4030.0	4030.0	4030.0
16.	Firm Industrial	Estimated on basis of individual customers.				
17.	Intr. Industrial	-	-	-	-	-
18.						
19.						

		As of January 1st			
		Actual			Estimated
		1951 (W)	1952 (X)	1953 (Y)	1954 (Z)
20.	Space Heating Sat. - %	16%	22%	28%	45%

		Estimated			
		1955 (AA)	1956 (BB)	1957 (CC)	1958 (DD)
21.	Space Heating Sat. - %	55%	62%	67%	70%

15792

Exhibit 1
Sheet 11 of 31

PANHANDLE EASTERN PIPE LINE COMPANY

Market Data
Number of Customers by Classes of Service
ILLINOIS POWER COMPANY (Name of Purchaser)
Clinton (Distribution System)

(A)	Customer Classification (B)	As of January 1st Actual MCF 1951 (C)	1952 (D)	1953 (E)	Estimated 1954 (F)
	Residential				
1.	Non-Heating	1397	1421	1437	1192
2.	Space-Heating	136	141	151	400
3.	Total Residential	1533	1562	1588	1592
	Commercial				
4.	Non-Heating	262	258	258	258
5.	Space-Heating	43	47	49	150
6.	Total Commercial	305	305	307	408
7.	Firm Industrial	1	1	1	-
8.	Interruptible Industrial	-	-	-	-
9.	Other Customers	-	-	-	-
10.	Total Customers	1839	1868	1896	2000

		As of January 1st Estimated MCF 1955 (G)	1956 (H)	1957 (I)	1958 (J)
	Residential				
11.	Non-Heating	990	843	793	665
12.	Space-Heating	500	700	800	1000
13.	Total Residential	1490	1543	1593	1665
	Commercial				
14.	Non-Heating	260	257	257	260
15.	Space-Heating	250	300	350	375
16.	Total Commercial	510	557	607	635
17.	Firm Industrial	-	-	-	-
18.	Interruptible Industrial	-	-	-	-
19.	Other Customers	-	-	-	-
20.	Total Customers	2000	2100	2200	2300

PANHANDLE EASTERN PIPE LINE COMPANY

Market Data
Annual Gas Requirements by Classes of Service
ILLINOIS POWER COMPANY (Name of Purchaser)
Clinton (Distribution System)

Thousands
MCF (000's omitted of Cu. Ft.) @ 14.73 psia

(A)	Annual Gas Requirements (B)	Actual 1950 (C)	Actual 1951 (D)	Actual 1952 (E)	Estimated 1953 (F)	Estimated 1954 (G)	Estimated 1955 (H)	Estimated 1956 (I)	Estimated 1957 (J)
	Sales								
	Residential								
1.	Non-Heating	26782	27945	28619	28000	24000	21000	20000	18000
2.	Space-Heating	24792	27633	27124	52000	86000	114000	143000	171000
3.	Total Residential	51534	55578	55743	80000	110000	135000	163000	189000
	Commercial								
4.	Non-Heating	14432	14926	14888	15000	16000	17000	17000	17000
5.	Space-Heating	12937	15543	15550	34000	51000	94000	111000	123000
6.	Total Commercial	27369	30469	30438	49000	67000	111000	128000	140000
7.	Firm Industrial	3860	7602	8966	10000	10000	10000	10000	10000
8.	Interruptible Industrial	-	-	-	-	-	-	-	-
9.	Other Sales	-	-	-	-	-	-	-	-
10.	Total Sales	82763	93649	95147	139000	187000	256000	301000	339000
11.	Company Use and Unaccounted-For	10260	9487	8947	8000	7000	6000	5000	5000
12.	Total Send-Out	93023	103136	104194	147000	194000	262000	306000	344000
	Curtailments								
13.	Firm Industrial	-	-	-	-	-	-	-	-
14.	Interruptible Industrial	-	-	-	-	-	-	-	-
15.	Other	-	-	-	-	-	-	-	-
16	Total Curtailments	-	-	-	-	-	-	-	-
17	Total Annual Gas Requirements	93023	103136	104194	147000	194000	262000	306000	344000

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PANHANDLE EASTERN PIPE LINE COMPANY

Market Data

Peak Day Gas Requirements by Classes of Service

ILLINOIS POWER COMPANY (Name of Purchaser)

Clinton (Distribution System)

MCF (Thousands of Cu. Ft.) @ 14.73 psia

(A)	Peak Day Gas Requirements (*) (B)	Actual 1950-51 (C)	1951-52 (D)	1952-53 (E)	Estimated 1953-54 (F)	1954-55 (G)	1955-56 (H)	1956-57 (I)	1957-58 (J)
	Sales								
	Residential								
1.	Non-Heating	100	95	121	119	99	84	79	67
2.	Space-Heating	189	174	227	760	950	1330	1520	1900
3.	Total Residential	289	269	348	879	1049	1414	1599	1967
	Commercial								
4.	Non-Heating	123	113	143	169	171	169	169	171
5.	Space-Heating	130	124	110	605	1008	1209	1411	1511
6.	Total Commercial	253	237	253	774	1179	1378	1580	1682
7.	Firm Industrial	10	10	10	10	10	10	10	10
8.	Interruptible Industrial	-	-	-	-	-	-	-	-
9.	Other Sales	-	-	-	-	-	-	-	-
10.	Total Sales	552	516	611	1663	2238	2802	3189	3659
11.	Increase in Holder Stock								
12.	Company Use and Unaccounted-For	34	32	80	27	23	20	17	17
13.	Total Send-Out	586	548	691	1690	2261	2822	3206	3676
	Curtailments								
14.	Firm Industrial	-	-	-	-	-	-	-	-
15.	Interruptible Industrial	-	-	-	-	-	-	-	-
16.	Other	-	-	-	-	-	-	-	-
17.	Total Curtailments	-	-	-	-	-	-	-	-
18.	Total Peak Day Gas Requirements	586	548	691	1690	2261	2822	3206	3676
19.	Date	2-1-51	12-15-51	2-16-53	-	-	-	-	-
20.	Mean Temperature	-1°	/3°	/21°	0°	0°	0°	0°	0°

Note: (*) Day of Maximum send-out of firm gas.

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Sheet 29 of 38

PANHANDLE EASTERN PIPE LINE COMPANY

Market Data
Number of Customers by Classes of Service
ILLINOIS POWER COMPANY (Name of Purchaser)
Galesburg (Distribution System)

(A)	Customer Classification (B)	As of January 1st Actual M.F. 1951 (C)	1952 (D)	1953 (E)	Estimated 1954 (F)
	Residential				
1.	Non-Heating	9791	9667	9582	7315
2.	Space-Heating	1186	1525	1535	3800
3.	Total Residential	10977	11192	11117	11115
	Commercial				
4.	Non-Heating	719	708	719	719
5.	Space-Heating	80	86	82	350
6.	Total Commercial	799	794	801	1069
7.	Firm Industrial	7	11	8	9
8.	Interruptible Industrial	1	1	5	7
9.	Other Customers	-	-	-	-
10.	Total Customers	11784	11998	11931	12200

		As of January 1st Estimated M.F. 1955 (G)	1956 (H)	1957 (I)	1958 (J)
	Residential				
11.	Non-Heating	5908	5421	4821	4530
12.	Space-Heating	5200	5900	6700	7200
13.	Total Residential	11108	11321	11521	11730
	Commercial				
14.	Non-Heating	725	710	710	725
15.	Space-Heating	550	650	750	825
16.	Total Commercial	1275	1360	1460	1550
17.	Firm Industrial	9	10	10	10
18.	Interruptible Industrial	8	9	9	10
19.	Other Customers	-	-	-	-
20.	Total Customers	12400	12700	13000	13300

PANHANDLE EASTERN PIPE LINE COMPANY

Market Data
Annual Gas Requirements by Classes of Service
ILLINOIS POWER COMPANY (Name of Purchaser)
Galesburg (Distribution System)

Thousands
MMCF (Millions of Cu. Ft.) @ 14.73 psia

(A)	Annual Gas Requirements (B)	Actual 1950 (C)	Actual 1951 (D)	Actual 1952 (E)	Estimated 1953 (F)	Estimated 1954 (G)	Estimated 1955 (H)	Estimated 1956 (I)	Estimated 1957 (J)
	Sales								
	Residential								
1.	Non-Heating	224054	230638	224396	203000	165000	147000	138000	131000
2.	Space-Heating	197261	291185	313018	560000	950000	1166000	1323000	1460000
3.	Total Residential	421315	521823	537414	763000	1115000	1313000	1461000	1591000
	Commercial								
4.	Non-Heating	79218	111371	109598	111000	116000	119000	121000	126000
5.	Space-Heating	27423	29693	28402	151000	158000	210000	245000	276000
6.	Total Commercial	106641	141064	138000	262000	274000	329000	366000	402000
7.	Firm Industrial	96383	183313	182183	200000	225000	250000	275000	300000
8.	Interruptible Industrial	144909	160834	123066	130000	140000	150000	160000	175000
9.	Other Sales	-	-	-	-	-	-	-	-
10.	Total Sales	769248	1007034	980663	1355000	1754000	2042000	2262000	2468000
11.	Company Use and Unaccounted-For	111977	74567	96418	97000	92000	90000	85000	85000
12.	Total Send-Out	881225	1081601	1077081	1452000	1846000	2132000	2347000	2553000
	Curtailments								
13.	Firm Industrial	-	-	-	-	-	-	-	-
14.	Interruptible Industrial	7947	7507	-	4000	15000	35000	40000	42000
15.	Other	-	-	-	-	-	-	-	-
16.	Total Curtailments	7947	7507	-	4000	15000	35000	40000	42000
17.	Total Annual Gas Requirements	889172	1089108	1077081	1456000	1861000	2167000	2387000	2595000

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PANHANDLE EASTERN PIPE LINE COMPANY

Market Data
Peak Day Gas Requirements by Classes of Service
ILLINOIS POWER COMPANY (Name of Purchaser)
Galesburg (Distribution System)

(A)	Peak Day Gas Requirements (*) (B)	MCF (Thousands of Cu. Ft.) @ 14.73 psia							
		Actual			Estimated				
		1950-51 (C)	1951-52 (D)	1952-53 (E)	1953-54 (F)	1954-55 (G)	1955-56 (H)	1956-57 (I)	1957-58 (J)
	Sales								
	Residential								
1.	Non-Heating	984	948	811	732	591	542	482	453
2.	Space-Heating	2271	2621	2910	7420	9880	11210	12750	13580
3.	Total Residential	3255	3769	2952	8152	10471	11752	13232	14033
	Commercial								
4.	Non-Heating	473	456	399	472	476	466	466	476
5.	Space-Heating	325	337	493	1477	2319	2620	3023	3325
6.	Total Commercial	798	793	642	1983	2812	3086	3489	3801
7.	Firm Industrial	300	343	313	300	300	300	300	300
8.	Interruptible Industrial	49	547	1187	-	-	-	-	-
9.	Other Sales	-	-	-	-	-	-	-	-
10.	Total Sales	4402	5252	6113	10431	13566	15138	17021	18134
11.	Increase in Holder Stock								
12.	Company Use and Unaccounted-For	234	194	202	327	323	300	284	284
13.	Total Send-Out	4636	5446	6315	10758	13889	15438	17305	18418
	Curtailments								
14.	Firm Industrial	-	-	-	-	-	-	-	-
15.	Interruptible Industrial	551	-	-	2000	2400	2800	3100	3500
16.	Other	-	-	-	-	-	-	-	-
17.	Total Curtailments	551	-	-	2000	2400	2800	3100	3500
18.	Total Peak Day Gas Requirements	5187	5446	6315	12758	16289	18238	20405	21918
19.	Date	2-1-51	12-15-51	2-16-53	-	-	-	-	-
20.	Mean Temperature	-1°	/3°	/21°	0°	0°	0°	0°	0°

Note: (*) Day of Maximum send-out of firm gas.

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PANHANDLE EASTERN PIPE LINE COMPANY

Market Data
Annual Gas Supply
ILLINOIS POWER COMPANY (Name of Purchaser)
Galesburg (Distribution System)
Thousands
MCF (000's of Cu. Ft.) @ 14.73 psia

(A)	Annual Gas Supply (B)	Actual 1950 (C)	1951 (D)	1952 (E)	Estimated 1953 (F)	1954 (G)	1955 (H)	1956 (I)	1957 (J)
	Natural Gas Purchases								
	Pipe Line Companies								
1.	P.E.P.L. Co.	881225	1031601	1077031	1152000	1846000	2132000	2347000	2553000
2.		-	-	-	-	-	-	-	-
3.	Other Sources	-	-	-	-	-	-	-	-
4.	Total Natural Gas Purchases	881225	1031601	1077031	1152000	1846000	2132000	2347000	2553000
5.	Natural Gas Production - Total	-	-	-	-	-	-	-	-
6.	From Underground Storage	-	-	-	-	-	-	-	-
7.	From Holders and Line Pack	-	-	-	-	-	-	-	-
8.	Total Natural Gas Supply	881225	1031601	1077031	1152000	1846000	2132000	2347000	2553000
	Manufactured Gas								
9.	Purchases	-	-	-	-	-	-	-	-
10.	Production	-	-	-	-	-	-	-	-
11.	Water Gas, Oil Gas, etc.	-	-	-	-	-	-	-	-
12.	Liquefied Petroleum Gas	-	-	-	-	-	-	-	-
13.	Total Manufactured Gas	-	-	-	-	-	-	-	-
14.	Total Annual Gas Supply	881225	1031601	1077031	1152000	1846000	2132000	2347000	2553000

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Exhibit X-18
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PANHANDLE EASTERN PIPE LINE COMPANY

Market Data
Number of Customers by Classes of Service
Village of Morton (Name of Purchaser)
Morton Municipal Gas Co. (Distribution System)

(A)	Customer Classification (B)	As of January 1st Actual 1951 (C)	1952 (D)	1953 (E)	Estimated 1954 (F)
	Residential				
1.	Non-Heating	233	192	146	81
2.	Space-Heating	830	1,000	1,107	1,225
3.	Total Residential	1,063	1,192	1,253	1,306
	Commercial				
4.	Non-Heating	None	None	None	None
5.	Space-Heating	6	6	8	12
6.	Total Commercial	6	6	8	12
7.	Firm Industrial	2	2	2	2
8.	Interruptible Industrial	None	None	None	None
9.	Other Customers	None	None	None	None
10.	Total Customers	1,071	1,200	1,263	1,320

		As of January 1st Estimated 1955 (G)	1956 (H)	1957 (I)	1958 (J)
	Residential				
11.	Non-Heating	69	69	69	69
12.	Space-Heating	1287	1307	1318	1327
13.	Total Residential	1356	1376	1387	1396
	Commercial				
14.	Non-Heating	None	None	None	None
15.	Space-Heating	12	12	12	12
16.	Total Commercial	12	12	12	12
17.	Firm Industrial	2	2	2	2
18.	Interruptible Industrial	None	None	None	None
19.	Other Customers	None	None	None	None
20.	Total Customers	1370	1390	1401	1410

Exhibit X-18
Sheet 2 of 7

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PANHANDLE EASTERN PIPE LINE COMPANY

Market Data
Annual Gas Requirements by Classes of Service
Village of Morton (Name of Purchaser)
Morton Municipal Gas Co. (Distribution System)

Hundreds C.C.F. / ~~MCF~~ (Millions of Cu. Ft.) @ 14.73 psia

(A)	Annual Gas Requirements (B)	Actual 1950 (C)	Actual 1951 (D)	Actual 1952 (E)	Estimated 1953 (F)	Estimated 1954 (G)	Estimated 1955 (H)	Estimated 1956 (I)	Estimated 1957 (J)
	Sales								
	Residential								
1.	Non-Heating	466	384	292	162	138	138	138	138
2.	Space-Heating	1699637	2438709	2540972	2800244	2940118	3087130	3147875	3210835
3.	Total Residential	1701103	2439093	2541264	2800406	2940256	3087268	3148013	3210973
	Commercial								
4.	Non-Heating	None	None	None	None	None	None	None	None
5.	Space-Heating	152200	188900	212500	244200	339900	339900	339900	339900
6.	Total Commercial	152200	188900	212500	244200	339900	339900	339900	339900
7.	Firm Industrial	515400	407700	344900	310600	400000	400000	400000	400000
8.	Interruptible Industrial	None	None	None	None	None	None	None	None
9.	Other Sales	None	None	None	None	None	None	None	None
10.	Total Sales	2368703	3035693	3098664	3355206	3680156	3827168	3887913	3950873
11.	Company Use and Unaccounted-For	None	None	None	None	None	None	None	None
12.	Total Send-Out	2368703	3035693	3098664	3355206	3680156	3827168	3887913	3950873
	Curtailments								
13.	Firm Industrial	None	None	None	None	None	None	None	None
14.	Interruptible Industrial	None	None	None	None	None	None	None	None
15.	Other	None	None	None	None	None	None	None	None
16.	Total Curtailments	None	None	None	None	None	None	None	None
17.	Total Annual Gas Requirements	2368703	3035693	3098664	3355206	3680156	3827168	3887913	3950873

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Exhibit X-18
Sheet 3 of 7

PANHANDLE EASTERN PIPE LINE COMPANY

Market Data
Peak Day Gas Requirements by Classes of Service

Village of Morton (Name of Purchaser)
Morton Municipal Gas Co. (Distribution System)

(A)	Peak Day Gas Requirements (*) (B)	MCF (Thousands of Cu. Ft.) @ 14.73 psia — Actual 1950-51 (C)	Actual 1951-52 (D)	Actual 1952-53 (E)	Estimated 1953-54 (F)	Estimated 1954-55 (G)	Estimated 1955-56 (H)	Estimated 1956-57 (I)	Estimated 1957-58 (J)
	Sales								
	Residential								
1.	Non-Heating	.002	.002	.002	.002	.002	.002	.002	.002
2.	Space-Heating	1660	1823	1862	2222	2272	2422	2572	2722
3.	Total Residential	1662	1825	1864	2224	2274	2424	2574	2724
	Commercial								
4.	Non-Heating	None	None	None	None	None	None	None	None
5.	Space-Heating	28	24	64	48	48	48	48	48
6.	Total Commercial	28	24	64	48	48	48	48	48
7.	Firm Industrial	36	24	28	28	28	28	22	22
8.	Interruptible Industrial	None	None	None	None	None	None	None	None
9.	Other Sales	None	None	None	None	None	None	None	None
10.	Total Sales	1726	1873	1956	2300	2350	2500	2644	2794
11.	Increase in Holder Stock	None	None	None	None	None	None	None	None
12.	Company Use and Unaccounted-For	None	None	None	None	None	None	None	None
13.	Total Send-Out	1726	1873	1956	2300	2350	2500	2644	2794
	Curtailments								
14.	Firm Industrial	None	None	None	None	None	None	None	None
15.	Interruptible Industrial	None	None	None	None	None	None	None	None
16.	Other	None	None	None	None	None	None	None	None
17.	Total Curtailments	None	None	None	None	None	None	None	None
18.	Total Peak Day Gas Requirements	1726	1873	1956	2300	2350	2500	2644	2794
19.	Date	[illegible]-51	[illegible]-51	[illegible]					
20.	Mean Temperature	No Data Available							

Note: (*) Day of Maximum send-out of firm gas.

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PANHANDLE EASTERN PIPE LINE COMPANY

Market Data
Annual Gas Supply

Village of Morton (Name of Purchaser)
Morton Municipal Gas Co. (Distribution System)

M.C.F. ~~MMCF (Millions~~ Thousands of Cu. Ft.) @ 14.73 psia

(A)	Annual Gas Supply (B)	Actual 1950 (C)	1951 (D)	1952 (E)	Estimated 1953 (F)	1954 (G)	1955 (H)	1956 (I)	1957 (J)
	Natural Gas Purchases								
1.	Pipe Line Companies P.E.P.L. Co.	229,712	238,872	245,111	271,860	407,790	611,685	734,022	888,826
2.									
3.	Other Sources	None	None	None	None	None	None	None	None
4.	Total Natural Gas Purchases	229,712	238,872	235,111	271,860	407,790	611,685	734,022	888,826
5.	Natural Gas Production - Total	None	None	None	None	None	None	None	None
6.	From Underground Storage	"	"	"	"	"	"	"	"
7.	From Holders and Line Pack	"	"	"	"	"	"	"	"
8.	Total Natural Gas Supply	"	"	"	"	"	"	"	"
	Manufactured Gas								
9.	Purchases	"	"	"	"	"	"	"	"
10.	Production	"	"	"	"	"	"	"	"
11.	Water Gas, Oil Gas, etc.	"	"	"	"	"	"	"	"
12.	Liquefied Petroleum Gas	"	"	"	"	"	"	"	"
13.	Total Manufactured Gas	"	"	"	"	"	"	"	"
14.	Total Annual Gas Supply	229,712	238,872	245,111	271,860	407,790	611,685	734,022	888,826
	Inserted by Panhandle - MMCF	227.9	238.6	255.3	271.9	368.0	382.7	388.8	395.1

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PANHANDLE EASTERN PIPE LINE COMPANY

Market Data
Peak Day Gas Supply

CENTRAL INDIANA GAS COMPANY (Name of Purchaser)
(Distribution System)

MCF (Thousands of Cu. Ft.) @ 14.73 psia

(A)	Peak Day Gas Supply (*) (B)	Actual 1950-51 (C)	1951-52 (D)	1952-53 (E)	Estimated 1953-54 (F)	1954-55 (G)	1955-56 (H)	1956-57 (I)	1957-58 (J)
	Natural Gas Purchases								
1.	Pipe Line Companies								
	P.E.P.L. Co.	53,500	69,500	81,750	85,000	100,000	100,000	100,000	100,000
2.									
3.	Other Sources								
4.	Total Natural Gas Purchases	53,500	69,500	81,750	85,000	100,000	100,000	100,000	100,000
5.	Natural Gas Production - Total								
6.	From Underground Storage								26,000
7.	From Holders and Line Pack	10		(90)					
8.	Total Natural Gas Supply	53,510	69,500	81,660	85,000	100,000	100,000	100,000	126,000
	Manufactured Gas								
9.	Purchases								
10.	Production								
11.	Water Gas, Oil Gas, etc.	-0-	-0-	-0-	2,000	-0-	3,000	3,000	-0-
12.	Liquefied Petroleum Gas	-0-	-0-	-0-	2,140	2,300	3,500	3,500	-0-
13.	Total Manufactured Gas	-0-	-0-	-0-	4,140	2,300	6,500	6,500	-0-
14.	Total Peak Day Gas Supply	53,510	69,500	81,660	89,140	102,300	106,500	106,500	126,000

Note: (*) Day of maximum send-out of firm gas.

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PANHANDLE EASTERN PIPE LINE COMPANY

Market Data
Annual Gas Supply
GREENFIELD GAS COMPANY, INC. (Name of Purchaser)
All Property (Distribution System)

MMCF (Millions of Cu. Ft.) @ 14.73 psia

(A)	Annual Gas Supply (B)	Actual 1950 (C)	1951 (D)	1952 (E)	Estimated 1953 (F)	1954 (G)	1955 (H)	1956 (I)	1957 (J)
	Natural Gas Purchases								
	Pipe Line Companies								
1.	P.E.P.L. Co.	342	453	490	555	584	606	626	648
2.		0	0	0	0	0	0	0	0
3.	Other Sources	0	0	0	0	0	0	0	0
4.	Total Natural Gas Purchases	342	453	490	555	584	606	626	648
5.	Natural Gas Production -	0	0	0	0	0	0	0	0
	Total	342	453	490	555	584	606	626	648
6.	From Underground Storage	0	0	0	0	0	0	0	0
7.	From Holders and Line Pack	0	0	0	0	0	0	0	0
8.	Total Natural Gas Supply	342	453	490	555	584	606	626	648
	Manufactured Gas								
9.	Purchases	0	0	0	0	0	0	0	0
10.	Production	0	0	0	0	0	0	0	0
11.	Water Gas, Oil Gas, etc.	0	0	0	0	0	0	0	0
12.	Liquefied Petroleum Gas	0	0	0	0	0	0	0	0
13.	Total Manufactured Gas	0	0	0	0	0	0	0	0
14.	Total Annual Gas Supply	342	453	490	555	584	606	626	648

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Exhibit X-23
Sheet 1 of 6

PANHANDLE EASTERN PIPE LINE COMPANY

Market Data
Number of Customers by Classes of Service
GREENFIELD GAS COMPANY, INC. (Name of Purchaser)
Fortville (Distribution System)

(A)	Customer Classification (B)	As of January 1st Actual 1951 (C)	1952 (D)	1953 (E)	Estimated 1954 (F)
	Residential				
1.	Non-Heating	235	192	183	171
2.	Space-Heating	397	463	504	537
3.	Total Residential	632	655	687	708
	Commercial				
4.	Non-Heating	21	15	21	20
5.	Space-Heating	58	60	63	66
6.	Total Commercial	79	75	84	86
7.	Firm Industrial	1	1	1	1
8.	Interruptible Industrial	0	0	0	0
9.	Other Customers	0	0	0	0
10.	Total Customers	712	731	772	795

		As of January 1st Estimated 1955 (G)	1956 (H)	1957 (I)	1958 (J)
	Residential				
11.	Non-Heating	173	173	173	175
12.	Space-Heating	559	584	609	634
13.	Total Residential	732	757	782	809
	Commercial				
14.	Non-Heating	20	20	20	20
15.	Space-Heating	67	67	67	69
16.	Total Commercial	87	87	87	89
17.	Firm Industrial	1	1	1	1
18.	Interruptible Industrial	0	0	0	0
19.	Other Customers	0	0	0	0
20.	Total Customers	820	845	870	899

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Sheet 10 of 38

PANHANDLE EASTERN PIPE LINE COMPANY

Market Data
Annual Gas Requirements by Classes of Service
GREENFIELD GAS COMPANY, INC. (Name of Purchaser)
Fortville (Distribution System)

(A)	Annual Gas Requirements (B)	MMCF (Millions of Cu. Ft.) @ 14.73 psia							
		Actual			Estimated				
		1950 (C)	1951 (D)	1952 (E)	1953 (F)	1954 (G)	1955 (H)	1956 (I)	1957 (J)
	Sales								
	Residential								
1.	Non-Heating	5	6	7	6	6	6	6	6
2.	Space-Heating	49	75	81	90	95	99	104	108
3.	Total Residential	54	81	88	96	101	105	110	114
	Commercial								
4.	Non-Heating	1	1	2	2	2	2	2	2
5.	Space-Heating	12	14	15	17	17	17	17	17
6.	Total Commercial	13	15	17	19	19	19	19	19
7.	Firm Industrial	1	2	2	2	2	2	2	2
8.	Interruptible Industrial	0	0	0	0	0	0	0	
9.	Other Sales	0	0	0	0	0	0	0	
10.	Total Sales	68	98	107	117	122	126	131	135
11.	Company Use and Unaccounted-For	7	25	20	20	20	20	20	20
12.	Total Send-Out	75	123	127	137	142	146	151	155
	Curtailments								
13.	Firm Industrial	0	0	0	0	0	0	0	0
14.	Interruptible Industrial	0	0	0	0	0	0	0	0
15.	Other	0	0	0	0	0	0	0	0
16.	Total Curtailments	0	0	0	0	0	0	0	0
17.	Total Annual Gas Requirements	75	123	127	137	142	146	151	155

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Exhibit X-23
Sheet 11 of 3

PANHANDLE EASTERN PIPE LINE COMPANY

Market Data

Peak Day Gas Requirements by Classes of Service

GREENFIELD GAS COMPANY, INC. (Name of Purchaser)

Fortville (Distribution System)

MCF (Thousands of Cu. Ft.) @ 14.73 psia

(A)	Peak Day Gas Requirements (*) (B)	Actual 1950-51 (C)	Actual 1951-52 (D)	Actual 1952-53 (E)	Estimated 1953-54 (F)	Estimated 1954-55 (G)	Estimated 1955-56 (H)	Estimated 1956-57 (I)	Estimated 1957-58 (J)
	Sales								
	Residential								
1.	Non-Heating	29	20	23	22	22	22	22	22
2.	Space-Heating	680	658	580	913	950	993	1035	1078
3.	Total Residential	709	678	603	935	972	1015	1057	1100
	Commercial								
4.	Non-Heating	5	4	9	8	8	8	8	8
5.	Space-Heating	143	116	106	167	170	169	170	174
6.	Total Commercial	148	120	115	175	178	177	178	182
7.	Firm Industrial	5	18	12	19	19	19	19	19
8.	Interruptible Industrial	0	0	0	0	0	0	0	0
9.	Other Sales	0	0	0	0	0	0	0	0
10.	Total Sales	862	816	730	1129	1169	1211	1254	1301
11.	Increase in Holder Stock	0	0	0	0	0	0	0	0
12.	Company Use and Unaccounted-For	134	142	114	59	59	59	59	59
13.	Total Send-Out	996	958	844	1188	1228	1270	1313	1360
	Curtailments								
14.	Firm Industrial	0	0	0	0	0	0	0	0
15.	Interruptible Industrial	0	0	0	0	0	0	0	0
16.	Other	0	0	0	0	0	0	0	0
17.	Total Curtailments	0	0	0	0	0	0	0	0
18.	Total Peak Day Gas Requirements	996	958	844	1188	1228	1270	1313	1360
19.	Date	1/29	12/15	2/21					
20.	Mean Temperature	5°	2°	22°	0°	0°	0°	0°	0°

Note: (*) Day of Maximum send-out of firm gas.

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PANHANDLE EASTERN PIPE LINE COMPANY

Market Data
Number of Customers by Classes of Service
GREENFIELD GAS COMPANY, INC. (Name of Purchaser)
Greenfield (Distribution System)

(A)	Customer Classification (B)	As of January 1st Actual 1951 (C)	1952 (D)	1953 (E)	Estimated 1954 (F)
	Residential				
1.	Non-Heating	879	770	777	789
2.	Space-Heating	819	1,035	1,193	1,323
3.	Total Residential	1,698	1,805	1,970	2,112
	Commercial				
4.	Non-Heating	40	43	38	36
5.	Space-Heating	97	113	122	125
6.	Total Commercial	137	156	160	161
7.	Firm Industrial	7	8	8	9
8.	Interruptible Industrial	0	0	0	0
9.	Other Customers	0	0	0	0
10.	Total Customers	1,842	1,969	2,138	2,282

		As of January 1st Estimated 1955 (G)	1956 (H)	1957 (I)	1958 (J)
	Residential				
11.	Non-Heating	792	795	795	800
12.	Space-Heating	1,392	1,492	1,542	1,642
13.	Total Residential	2,184	2,287	2,337	2,442
	Commercial				
14.	Non-Heating	36	36	36	36
15.	Space-Heating	129	129	129	133
16.	Total Commercial	165	165	165	169
17.	Firm Industrial	9	9	9	9
18.	Interruptible Industrial	0	0	0	0
19.	Other Customers	0	0	0	0
20.	Total Customers	2,358	2,461	2,511	2,620

PANHANDLE EASTERN PIPE LINE COMPANY

Market Data
Annual Gas Requirements by Classes of Service
GREENFIELD GAS COMPANY, INC. (Name of Purchaser)
Greenfield (Distribution System)

MMCF (Millions of Cu. Ft.) @ 14.73 psia

(A')	Annual Gas Requirements (B)	Actual 1950 (C)	Actual 1951 (D)	Actual 1952 (E)	Estimated 1953 (F)	Estimated 1954 (G)	Estimated 1955 (H)	Estimated 1956 (I)	Estimated 1957 (J)
	Sales								
	Residential								
1.	Non-Heating	28	23	25	24	24	24	24	24
2.	Space-Heating	143	188	197	233	252	267	281	295
3.	Total Residential	171	211	222	257	276	291	305	319
	Commercial								
4.	Non-Heating	4	4	3	2	2	2	2	2
5.	Space-Heating	36	46	62	72	75	76	76	77
6.	Total Commercial	40	50	65	74	77	78	78	79
7.	Firm Industrial	3	6	8	10	10	10	10	10
8.	Interruptible Industrial	0	0	0	0	0	0	0	0
9.	Other Sales	0	0	0	0	0	0	0	0
10.	Total Sales	214	267	295	341	363	379	393	408
11.	Company Use and Unaccounted-For	43	37	36	36	36	36	36	36
12.	Total Send-Out	257	304	331	377	399	415	429	444
	Curtailments								
13.	Firm Industrial	0	0	0	0	0	0	0	0
14.	Interruptible Industrial	0	0	0	0	0	0	0	0
15.	Other	0	0	0	0	0	0	0	0
16.	Total Curtailments	0	0	0	0	0	0	0	0
17.	Total Annual Gas Requirements	257	304	331	377	399	415	429	444

PANHANDLE EASTERN PIPE LINE COMPANY

Market Data
Peak Day Gas Requirements by Classes of Service
GREENFIELD GAS COMPANY, INC. (Name of Purchaser)
Greenfield (Distribution System)

MCF (Thousands of Cu. Ft.) @ 14.73 psia

(A)	Peak Day Gas Requirements (*) (B)	Actual 1950-51 (C)	Actual 1951-52 (D)	Actual 1952-53 (E)	Estimated 1953-54 (F)	Estimated 1954-55 (G)	Estimated 1955-56 (H)	Estimated 1956-57 (I)	Estimated 1957-58 (J)
	Sales								
	Residential								
1.	Non-Heating	96	77	86	87	87	88	88	88
2.	Space-Heating	1627	1765	1669	2422	2549	2732	2823	3007
3.	Total Residential	1723	1842	1755	2509	2636	2820	2911	3095
	Commercial								
4.	Non-Heating	15	15	10	9	9	9	9	9
5.	Space-Heating	293	401	412	553	568	568	568	583
6.	Total Commercial	308	416	422	562	577	577	577	592
7.	Firm Industrial	40	49	60	94	94	94	94	94
8.	Interruptible Industrial	0	0	0	0	0	0	0	0
9.	Other Sales	0	0	0	0	0	0	0	0
10.	Total Sales	2071	2301	2237	3165	3307	3491	3582	3781
11.	Increase in Holder Stock	0	0	0	0	0	0	0	0
12.	Company Use and Unaccounted-For	93	40	80	102	102	102	102	102
13.	Total Send-Out	2164	2347	2317	3267	3409	3593	3684	3883
	Curtailments								
14.	Firm Industrial	0	0	0	0	0	0	0	0
15.	Interruptible Industrial	0	0	0	0	0	0	0	0
16.	Other	0	0	0	0	0	0	0	0
17.	Total Curtailments	0	0	0	0	0	0	0	0
18.	Total Peak Day Gas Requirements	2164	2347	2317	3267	3409	3593	3684	3883
19.	Date	2/2	12/15	1/5					
20.	Mean Temperature	13°	2°	16°	0°	0°	0°	0°	0°

Note: (*) Day of Maximum send-out of firm gas.

Exhibit X-23
Sheet 5 of 8

PANHANDLE EASTERN PIPE LINE COMPANY

Market Data
Annual Gas Supply
Indiana Gas & Water Company, Inc. (Name of Purchaser)
Combined (Distribution System)

Thousands
MCF (000's of Cu. Ft.) @ 14.73 psia

	Annual Gas Supply	Actual 1950	1951	1952	1953	Estimated 1954	1955	1956	1957
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)
	Natural Gas Purchases								
	Pipe Line Companies								
1.	P.E.P.L. Co.	5,799,852.0	6,435,827.0	6,576,571.0	7,538,552.0	8,449,100	9,061,000	9,658,110	10,350,000
2.									
3.	Other Sources		663.3	658.4	674.5	400.	-	-	-
4.	Total Nat. Gas Pur.	5,799,852.0	6,436,510.3	6,577,229.4	7,539,226.5	8,449,500	9,061,000	9,658,110	10,350,000
5.	Natural Gas Production - Total		27,174.8	3,441.9	4,185.3	3,500	2,000	-	-
6.	From Underground Storage								
7.	From Holders & Line Pack	- 84.8	- 161.7	+ 151.1	- 78.4	-	-	-	-
8.	Total Natural Gas Supp	5,799,767.2	6,463,523.4	6,580,822.4	7,543,333.4	8,453,000	9,063,000	9,658,110	10,350,000
	Manufactured Gas								
9.	Purchases								
10.	Production								
11.	Water Gas, Oil Gas, etc.								
12.	Liquefied Petroleum Gas	18,618.4	24,792.6	3,427.4	1,145.2	10,000	10,000	25,000	10,000
13.	Total Manufactured Gas	18,618.4	24,792.6	3,427.4	1,145.2	10,000	10,000	25,000	10,000
14.	Total Annual Gas Supply	5,818,385.6	6,488,316.0	6,584,249.8	7,544,478.6	8,463,000	9,073,000	9,683,110	10,360,000

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Sheet 2 of 3

PANHANDLE EASTERN PIPE LINE COMPANY

Market Data
Number of Customers by Classes of Service

Kokomo Gas and Fuel Company (Name of Purchaser)
Kokomo, Indiana and adjacent area (Distribution System)

(A)	Customer Classification (B)	As of January 1st Actual 1951 (C)	1952 (D)	1953 (E)	Estimated 1954 (F)
	Residential				
1.	Non-Heating	8,042	7,116	6,280	5,680
2.	Space-Heating	1,765	3,119	4,394	5,400
3.	Total Residential	9,807	10,235	10,674	11,080
	Commercial				
4.	Non-Heating	336	329	349	380
5.	Space-Heating	253	341	429	460
6.	Total Commercial	589	670	778	~~850~~ 840 (a)
7.	Firm Industrial	47	54	59	69
8.	Interruptible Industrial	1	1	1	1
9.	Other Customers				
10.	Total Customers	10,444	10,960	11,512	~~12,000~~ 11,990 (a)

		As of January 1st Estimated 1955 (G)	1956 (H)	1957 (I)	1958 (J)
	Residential				
11.	Non-Heating	4,560	3,770	3,280	2,790
12.	Space-Heating	7,200	8,500	9,500	10,500
13.	Total Residential	11,760	12,270	12,780	13,290
	Commercial				
14.	Non-Heating	415	450	485	520
15.	Space-Heating	550	600	650	700
16.	Total Commercial	965	1,050	1,135	1,220
17.	Firm Industrial	74	79	84	89
18.	Interruptible Industrial	1	1	1	1
19.	Other Customers				
20.	Total Customers	12,800	13,400	14,000	14,600

(a) Corrected by P.E.P.L. Co.

PANHANDLE EASTERN PIPE LINE COMPANY

Market Data
Annual Gas Requirements by Classes of Service
Kokomo Gas and Fuel Company (Name of Purchaser)
Kokomo, Indiana and adjacent area (Distribution System)

MMCF (Millions of Cu. Ft.) @ 14.73 psia

(A)	Annual Gas Requirements (B)	Actual 1950 (C)	Actual 1951 (D)	Actual 1952 (E)	Estimated 1953 (F)	Estimated 1954 (G)	Estimated 1955 (H)	Estimated 1956 (I)	Estimated 1957 (J)
	Sales								
	Residential								
1.	Non-Heating	245	245	224	200	183	153	131	117
2.	Space-Heating	258	421	668	845	1,224	1,544	1,780	1,980
3.	Total Residential	503	666	892	1,045	1,407	1,697	1,911	2,097
	Commercial								
4.	Non-Heating	55	65	75	83	91	104	117	131
5.	Space-Heating	71	94	138	142	188	217	236	255
6.	Total Commercial	126	159	213	225	279	321	353	386
7.	Firm Industrial	721	1,038	1,497	1,650	1,670	1,730	1,705	1,765
8.	Interruptible Industrial	683	882	632	970	1,224	1,352	1,491	1,592
9.	Other Sales								
10.	Total Sales	2,033	2,745	3,234	3,890	4,580	5,100	5,460	5,840
11.	Company Use and Unaccounted-For	55	125	127	140	160	180	200	220
12.	Total Send-Out	2,088	2,870	3,361	4,030	4,740	5,280	5,660	6,060
	Curtailments								
13.	Firm Industrial	0	0	0	0	0	0	0	0
14.	Interruptible Industrial	42	42	0	50	100	110	120	130
15.	Other								
16.	Total Curtailments	42	42		50	100	110	120	130
17.	Total Annual Gas Requirements	2,130	2,912	3,361	4,080	4,840	5,390	5,780	6,190

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PANHANDLE EASTERN PIPE LINE COMPANY

Market Data

Peak Day Gas Requirements by Classes of Service

Kokomo Gas and Fuel Company (Name of Purchaser)

Kokomo, Indiana and adjacent area (Distribution System)

MCF (Thousands of Cu. Ft.) @ 14.73 psia

(A)	Peak Day Gas Requirements (*) (B)	Actual 1950-51 (C)	Actual 1951-52 (D)	Actual 1952-53 (E)	Estimated 1953-54 (F)	Estimated 1954-55 (G)	Estimated 1955-56 (H)	Estimated 1956-57 (I)	Estimated 1957-58 (J)
	Sales								
	Residential								
1.	Non-Heating	730	800	680	680	570	490	440	390
2.	Space-Heating	2,074	4,680	6,210	10,800	14,400	17,000	19,000	21,000
3.	Total Residential	2,804	5,480	6,890	11,480	14,970	17,490	19,440	21,390
	Commercial								
4.	Non-Heating	225	280	290	320	350	380	410	440
5.	Space-Heating	532	970	1,260	1,840	2,200	2,400	2,600	2,800
6.	Total Commercial	757	1,250	1,550	2,160	2,550	2,780	3,010	3,240
7.	Firm Industrial	3,204	5,580	6,090	6,260	7,200	7,400	7,300	7,600
8.	Interruptible Industrial	3,005	1,930	1,660	0	0	0	0	0
9.	Other Sales								
10.	Total Sales	9,770	14,240	16,190	19,900	24,720	27,670	29,750	32,230
11.	Increase in Holder Stock	0	0	0	0	0	0	0	0
12.	Company Use and Unaccounted-For	200	200	240	300	340	380	420	460
13.	Total Send-Out	9,970	14,240	16,430	20,200	25,060	28,050	30,170	32,690
	Curtailments								
14.	Firm Industrial	0	0	0	500	0	0	0	0
15.	Interruptible Industrial	0	0	840	4,500	5,200	5,800	6,200	6,500
16.	Other								
17.	Total Curtailments	0	0	840	5,000	5,200	5,800	6,200	6,500
18.	Total Peak Day Gas Requirements	9,970	14,240	17,270	25,200	30,260	33,850	36,370	39,190
19.	Date	3-19-51	1-29-52	1-5-53	-	-	-	-	-
20.	Mean Temperature	27° F	11° F	20° F	0° F	0° F	0° F	0° F	0° F

Note: (*) Day of Maximum send-out of firm gas.

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Exhibit X-27
Sheet 5 of 8

PANHANDLE EASTERN PIPE LINE COMPANY

Market Data
Annual Gas Supply

Kokomo Gas and Fuel Company (Name of Purchaser)
Kokomo, Indiana and adjacent area (Distribution System)

MMCF (Millions of Cu. Ft.) @ 14.73 psia

(A)	Annual Gas Supply (B)	Actual 1950 (C)	1951 (D)	1952 (E)	Estimated 1953 (F)	1954 (G)	1955 (H)	1956 (I)	1957 (J)
	Natural Gas Purchases								
1.	Pipe Line Companies								
	P.E.P.L. Co.	2,088	2,870	3,361	4,028	4,720	5,260	5,638	6,036
2.									
3.	Other Sources								
4.	Total Natural Gas Purchases	2,088	2,870	3,361	4,028	4,720	5,260	5,638	6,036
5.	Natural Gas Production - Total	2,088	2,870	3,361	4,028	4,720	5,260	5,638	6,036
6.	From Underground Storage								
7.	From Holders and Line Pack								
8.	Total Natural Gas Supply	2,088	2,870	3,361	4,028	4,720	5,260	5,638	6,036
	Manufactured Gas								
9.	Purchases								
10.	Production								
11.	Water Gas, Oil Gas, etc.								
12.	Liquefied Petroleum Gas								
13.	Total Manufactured Gas	0	+	0	2	20	20	22	24
14.	Total Annual Gas Supply	2,088	2,870	3,361	4,030	4,740	5,280	5,660	6,060

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PANHANDLE EASTERN PIPE LINE COMPANY

Market Data
Annual Gas Supply

Town of Lapel (Name of Purchaser)
Lapel, Indiana (Distribution System)

Thousands
MMCF (~~MMMMMM~~ of Cu. Ft.) @ 14.73 psia

(A)	Annual Gas Supply (B)	Actual 1950 (C)	Actual 1951 (D)	Actual 1952 (E)	Estimated 1953 (F)	Estimated 1954 (G)	Estimated 1955 (H)	Estimated 1956 (I)	Estimated 1957 (J)
	Natural Gas Purchases								
1.	Pipe Line Companies								
	P.E.P.L. Co.			62 552	71 334	79 170	86 210	89 245	95 010
2.									
3.	Other Sources								
4.	Total Natural Gas Purchases								
5.	Natural Gas Production - Total								
6.	From Underground Storage								
7.	From Holders and Line Pack								
8.	Total Natural Gas Supply								
	Manufactured Gas								
9.	Purchases								
10.	Production								
11.	Water Gas, Oil Gas, etc.								
12.	Liquefied Petroleum Gas								
13.	Total Manufactured Gas								
14.	Total Annual Gas Supply			62 552	71 334	79 170	86 210	89 245	95 010

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Sheet 2 of [redacted]

PANHANDLE EASTERN PIPE LINE COMPANY

Market Data
Number of Customers by Classes of Service
Northern Indiana Public Service Company (Name of Purchaser)
Fort Wayne District (Distribution System)

(A)	Customer Classification (B)	As of January 1st Actual 1951 (C)	1952 (D)	1953 (E)	Estimated 1954 (F)
	Residential				
1.	Non-Heating	31,665	31,233	27,400	27,500
2.	Space-Heating	8,522	10,395	15,839	16,400
3.	Total Residential	40,187	41,628	43,239	43,900
	Commercial				
4.	Non-Heating	1,461	1,445	1,412	1,460
5.	Space-Heating	460	571	805	860
6.	Total Commercial	1,921	2,016	2,217	2,320
7.	Firm Industrial	115	113	120	125
8.	Interruptible Industrial	0	0	0	0
9.	Other Customers	85	85	93	95
10.	Total Customers	42,308	43,842	45,669	46,440

		As of January 1st Estimated 1955 (G)	1956 (H)	1957 (I)	1958 (J)
	Residential				
11.	Non-Heating	25,850	22,600	22,100	21,700
12.	Space-Heating	19,400	23,600	25,100	26,500
13.	Total Residential	45,250	46,200	47,200	48,200
	Commercial				
14.	Non-Heating	1,390	1,300	1,335	1,370
15.	Space-Heating	950	1,100	1,125	1,150
16.	Total Commercial	2,340	2,400	2,460	2,520
17.	Firm Industrial	128	131	134	137
18.	Interruptible Industrial	0	0	0	0
19.	Other Customers	98	100	102	104
20.	Total Customers	47,816	48,831	49,896	50,961

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PANHANDLE EASTERN PIPE LINE COMPANY

Market Data
Annual Gas Requirements by Classes of Service
Northern Indiana Public Service Company (Name of Purchaser)
Fort Wayne District (Distribution System)

MMCF (Millions of Cu. Ft.) @ 14.73 psia - Estimates on basis of 1000 BTU/c.f.

Annual Gas Requirements (A) (B)	Actual 1950 (C)	1951 (D)	1952 (E)	Estimated 1953 (F)	1954 (G)	1955 (H)	1956 (I)	1957 (J)
Sales								
Residential								
1. Non-Heating	890	936	870	805	825	761	715	714
2. Space-Heating	1,276	1,633	2,146	2,806	3,133	3,756	4,323	4,597
3. Total Residential	2,166	2,569	3,016	3,611	3,958	4,517	5,038	5,311
Commercial								
4. Non-Heating	249	281	307	301	306	301	301	310
5. Space-Heating	213	225	264	312	370	413	449	463
6. Total Commercial	462	506	571	613	676	714	750	773
7. Firm Industrial	1,588	1,750	1,698	2,074	2,466	2,512	2,645	2,796
8. Interruptible Industrial	0	0	0	0	0	0	0	0
9. Other Sales	34	56	43	38	38	40	41	42
10. Total Sales	4,250	4,881	5,328	6,336	7,138	7,783	8,474	8,922
11. Company Use and Unaccounted-For	372	280	404	346	476	476	476	476
12. Total Send-Out	4,622	5,161	5,732	6,682	7,614	8,259	8,950	9,398
Curtailments								
13. Firm Industrial	0	2	0	0	0	0	0	0
14. Interruptible Industrial	0	0	0	0	0	0	0	0
15. Other	0	0	0	0	0	0	0	0
16. Total Curtailments	0	2	0	0	0	0	0	0
17. Total Annual Gas Requirements	4,622	5,163	5,732	6,682	7,614	8,259	8,950	9,398

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PANHANDLE EASTERN PIPE LINE COMPANY

Market Data

Peak Day Gas Requirements by Classes of Service
Northern Indiana Public Service Company (Name of Purchaser)
Fort Wayne District (Distribution System)

MCF (Thousands of Cu. Ft.) @ 14.73 psia - Estimates on basis of 1000 BTU/c.f.

(A)	Peak Day Gas Requirements (*) (B)	Actual 1950-51 (C)	Actual 1951-52 (D)	Actual 1952-53 (E)	Estimated 1953-54 (F)	Estimated 1954-55 (G)	Estimated 1955-56 (H)	Estimated 1956-57 (I)	Estimated 1957-58 (J)
	Sales								
	Residential								
1.	Non-Heating	3,386	2,950	2,603	2,916	2,761	2,464	2,455	2,455
2.	Space-Heating	13,851	16,632	20,867	27,024	31,932	38,766	41,285	43,625
3.	Total Residential	17,237	19,582	23,470	29,940	34,693	41,230	43,740	46,080
	Commercial								
4.	Non-Heating	720	696	635	708	698	667	699	732
5.	Space-Heating	1,988	1,941	1,959	2,863	3,156	3,553	3,641	3,708
6.	Total Commercial	2,708	2,637	2,594	3,571	3,854	4,220	4,340	4,440
7.	Firm Industrial	5,983	3,747	6,908	8,401	9,185	9,653	10,232	10,334
8.	Interruptible Industrial	0	0	0	0	0	0	0	0
9.	Other Sales	187	289	145	230	230	230	240	240
10.	Total Sales	26,115	26,255	33,117	42,142	47,962	55,333	58,552	61,094
11.	Increase in Holder Stock	300	0	0	0	0	0	0	0
12.	Company Use and Unaccounted-For	1,291	1,300	1,569	1,710	1,710	1,710	1,710	1,730
13.	Total Send-Out	27,106	27,555	34,686	43,852	49,672	57,043	60,262	62,824
	Curtailments								
14.	Firm Industrial	1,461	0	0	0	0	0	0	0
15.	Interruptible Industrial	0	0	0	0	0	0	0	0
16.	Other	0	0	0	0	0	0	0	0
17.	Total Curtailments	1,461	0	0	0	0	0	0	0
18.	Total Peak Day Gas Requirements	28,567	27,555	34,686	43,852	49,672	57,043	60,262	62,824
19.	Date	2-2-51	12-18-51	1-6-53					
20.	Mean Temperature	-7° F	-5° F	8° F	0° F	0° F	0° F	0° F	0° F

Note: (*) Day of Maximum send-out of firm gas.

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PANHANDLE EASTERN PIPE LINE COMPANY

Market Data
Annual Gas Supply
Northern Indiana Public Service Company (Name of Purchaser)
Fort Wayne District (Distribution System)

MMCF (Millions of Cu. Ft.) @ 14.73 psia - Estimates on basis of 1000 BTU/c.f.

(A)	Annual Gas Supply (B)	Actual 1950 (C)	Actual 1951 (D)	Actual 1952 (E)	Estimated 1953 (F)	Estimated 1954 (G)	Estimated 1955 (H)	Estimated 1956 (I)	Estimated 1957 (J)
	Natural Gas Purchases								
	Pipe Line Companies								
1.	P.E.P.L. Co.	4,622	5,159	5,732	6,679	7,614	8,259	8,950	9,398
2.	_____								
3.	Other Sources	0	0	0	0	0	0	0	0
4.	Total Natural Gas Purchases	4,622	5,159	5,732	6,679	7,614	8,259	8,950	9,398
5.	Natural Gas Production	0	0	0	0	0	0	0	0
	Total	4,622	5,159	5,732	6,679	7,614	8,259	8,950	9,398
6.	From Underground Storage	0	0	0	0	0	0	0	0
7.	From Holders and Line Pack	0	0	0	0	0	0	0	0
8.	Total Natural Gas Supply	4,622	5,159	5,732	6,679	7,614	8,259	8,950	9,398
	Manufactured Gas								
9.	Purchases	0	0	0	0	0	0	0	0
10.	Production								
11.	Water Gas, Oil Gas, etc.	0	0	0	0	0	0	0	0
12.	Liquefied Petroleum Gas	0	2	0	3	0	0	0	0
13.	Total Manufactured Gas	0	2	0	3	0	0	0	0
14.	Total Annual Gas Supply	4,622	5,161	5,732	6,682	7,614	8,259	8,950	9,398

PANHANDLE EASTERN PIPE LINE COMPANY

Market Data
Annual Gas Supply

OHIO VALLEY GAS CORPORATION (Name of Purchaser)
LYNN, INDIANA (Distribution System)

MMCF (Millions of Cu. Ft.) @ 14.73 psia

(A)	Annual Gas Supply (B)	Actual 1950 (C)	Actual 1951 (D)	Actual 1952 (E)	Estimated 1953 (F)	Estimated 1954 (G)	Estimated 1955 (H)	Estimated 1956 (I)	Estimated 1957 (J)
	Natural Gas Purchases								
1.	Pipe Line Companies								
	P.E.P.L. Co.	40.7	50.5	53.3	56.4	66.9	72.3	77.1	82.0
2.									
3.	Other Sources								
4.	Total Natural Gas Purchases	40.7	50.5	53.3	56.4	66.9	72.3	77.1	82.0
5.	Natural Gas Production - Total	40.7	50.5	53.3	56.4	66.9	72.3	77.1	82.0
6.	From Underground Storage								
7.	From Holders and Line Pack	0	0	0	0	0	0	0	0
8.	Total Natural Gas Supply	40.7	50.5	53.3	56.4	66.9	72.3	77.1	82.0
	Manufactured Gas								
9.	Purchases								
10.	Production								
11.	Water Gas, Oil Gas, etc.								
12.	Liquefied Petroleum Gas								
13.	Total Manufactured Gas	0	0	0	0	0	0	0	0
14.	Total Annual Gas Supply	40.7	50.5	53.3	56.4	66.9	72.3	77.1	82.0

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PANHANDLE EASTERN PIPE LINE COMPANY

Market Data
Number of Customers by Classes of Service

OHIO VALLEY GAS CORPORATION (Name of Purchaser)
WINCHESTER, INDIANA (Distribution System)

(A)	Customer Classification (B)	As of January 1st Actual 1951 (C)	1952 (D)	1953 (E)	Estimated 1954 (F)
	Residential				
1	Non-Heating				
2	Space-Heating				
3	Total Residential	4307	4369	4405	4514
	Commercial				
4	Non-Heating				
5	Space Heating				
6	Total Commercial	293	310	323	323
7	Firm Industrial	13	17	13	12
8	Interruptible Industrial	0	0	0	0
9	Other Customers	12	12	12	15
10	Total Customers	4625	(a) 4706 4708	4753	4864

		As of January 1st Estimated 1955 (G)	1956 (H)	1957 (I)	Av. of 4 yrs. 51-53 1958 (J)
	Residential				
11.	Non-Heating				
12.	Space Heating				
13.	Total Residential	4566	4618	4670	4722
	Commercial				
14.	Non-Heating				
15.	Space Heating				
16.	Total Commercial	331	339	347	355
17.	Firm Industrial	13	14	15	16
18.	Interruptible Industrial	0	0	0	0
19.	Other Customers	16	17	18	19
20.	Total Customers	4926	4988	5050	5112

(a) Corrected by P.E.P.L. Co.

PANHANDLE EASTERN PIPE LINE COMPANY

Market Data
Annual Gas Requirements by Classes of Service

OHIO VALLEY GAS CORPORATION (Name of Purchaser)
WINCHESTER, INDIANA (Distribution System)

MMCF (Millions of Cu. Ft.) @ 14.73 psia

(A)	Annual Gas Requirements (B)	Actual 1950 (C)	1951 (D)	1952 (E)	1953 (F)	Estimated 1954 (G)	1955 (H)	1956 (I)	1957 (J)
	Sales								
	Residential								
1.	Non-Heating								
2.	Space-Heating								
3.	Total Residential	226.3	263.4	285.3	306.5	386.6	446.7	486.8	526.9
	Commercial								
4.	Non-Heating								
5.	Space-Heating								
6.	Total Commercial	59.9	64.0	54.1	54.7	60.0	60.0	62.0	62.0
7.	Firm Industrial	16.0	31.1	48.7	61.7	63.0	64.3	65.6	66.9
8.	Interruptible Industrial	0	0	0	0	0	0	0	0
9.	Other Sales	.6	1.1	1.4	1.2	1.3	1.3	1.4	1.4
10.	Total Sales	302.8	359.6	389.5	424.1	510.9	572.3	615.8	657.2
11.	Company Use and Unaccounted-For	56.4	58.0	58.2	41.1	45.2	50.0	52.0	56.0
12.	Total Send-Out	359.2	417.6	447.7	465.2	556.1	622.3	667.8	713.2
	Curtailments								
13.	Firm Industrial								
14.	Interruptible Industrial								
15.	Other								
16.	Total Curtailments	0	0	0	0	0	0	0	0
17.	Total Annual Gas Requirements	359.2	417.6	447.7	465.2	556.1	622.3	667.8	713.2

Exhibit X-31
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PANHANDLE EASTERN PIPE LINE COMPANY

Market Data

Peak Day Gas Requirements by Classes of Service

OHIO VALLEY GAS CORPORATION (Name of Purchaser)

WINCHESTER, INDIANA (Distribution System)

MCF (Thousands of Cu. Ft.) @ 14.73 psia

(A)	Peak Day Gas Requirements (*) (B)	Actual 1950-51 (C)	Actual 1951-52 (D)	Actual 1952-53 (E)	Estimated 1953-54 (F)	Estimated 1954-55 (G)	Estimated 1955-56 (H)	Estimated 1956-57 (I)	Estimated 1957-58 (J)
	Sales								
	Residential								
1.	Non-Heating								
2.	Space-Heating								
3.	Total Residential								
	Commercial								
4.	Non-Heating	NOT AVAILABLE BY CLASSIFICATION							
5.	Space-Heating								
6.	Total Commercial								
7.	Firm Industrial								
8.	Interruptible Industrial								
9.	Other Sales								
10.	Total Sales								
11.	Increase in Holder Stock								
12.	Company Use and Unaccounted-For								
13.	Total Send-Out	2216	2794	2619	4608	5482	5893	6084	6388
	Curtailments								
14.	Firm Industrial								
15.	Interruptible Industrial								
16.	Other								
17.	Total Curtailments	0	0	0	0	0	0	0	0
18.	Total Peak Day Gas Requirements	2216	2794	2619	4608	5482	5893	6084	6388
19.	Date	2-7-51	12-16-51	1-6-53	-	-	-	-	-
20.	Mean Temperature	?	-3	14	0	0	0	0	0

Note: (*) Day of Maximum send-out of firm gas.

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PANHANDLE EASTERN PIPE LINE COMPANY

Market Data
Annual Gas Supply

OHIO VALLEY GAS CORPORATION (Name of Purchaser)
WINCHESTER, INDIANA (Distribution System)

MMCF (Millions of Cu. Ft.) @ 14.73 psia

(A)	Annual Gas Supply (B)	Actual 1950 (C)	1951 (D)	1952 (E)	1953 (F)	Estimated 1954 (G)	1955 (H)	1956 (I)	1957 (J)
	Natural Gas Purchases								
1.	Pipe Line Companies P.E.P.L. Co.	359.2	417.6	447.7	465.2	551.1	617.3	662.8	708.2
2.									
3.	Other Sources								
4.	Total Natural Gas Purchases	359.2	417.6	447.7	465.2	551.1	617.3	662.8	708.2
5.	Natural Gas Production - Total								
6.	From Underground Storage								
7.	From Holders and Line Pack								
8.	Total Natural Gas Supply	359.2	417.6	447.7	465.2	551.1	617.3	662.8	708.2
	Manufactured Gas								
9.	Purchases								
10.	Production								
11.	Water Gas, Oil Gas, etc.								
12.	Liquefied Petroleum Gas	0	0	0	0	5.0	5.0	5.0	5.0
13.	Total Manufactured Gas	0	0	0	0	5.0	0	0	0
14.	Total Annual Gas Supply	359.2	417.6	447.7	465.2	556.1	622.3	667.8	713.2

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PANHANDLE EASTERN PIPE LINE COMPANY

Market Data
Number of Customers by Classes of Service
PENDLETON NATURAL GAS COMPANY (Name of Purchaser)
Pendleton and vicinity (Distribution System)

(A)	Customer Classification (B)	As of January 1st Actual 1951 (C)	Actual 1952 (D)	Actual 1953 (E)	Estimated 1954 (F)
	Residential				
1.	Non-Heating	542	431	365	321
2.	Space-Heating	238	378	486	584
3.	Total Residential	780	809	851	905
	Commercial				
4.	Non-Heating	18	15	15	14
5.	Space-Heating	38	44	46	46
6.	Total Commercial	56	59	61	60
7.	Firm Industrial	2	3	4	4
8.	Interruptible Industrial				
9.	Other Customers	1	1	1	1
10.	Total Customers	839	872	917	970

		As of January 1st Estimated 1955 (G)	1956 (H)	1957 (I)	1958 (J)
	Residential				
11.	Non-Heating	310	298	312	325
12.	Space-Heating	636	693	724	756
13.	Total Residential	946	991	1036	1081
	Commercial				
14.	Non-Heating	18	20	22	24
15.	Space-Heating	49	52	55	58
16.	Total Commercial	67	72	77	82
17.	Firm Industrial	4	4	4	4
18.	Interruptible Industrial				
19.	Other Customers	3	3	3	3
20.	Total Customers	1020	1070	1120	1170

PANHANDLE EASTERN PIPE LINE COMPANY

Market Data
Annual Gas Requirements by Classes of Service

PENDLETON NATURAL GAS COMPANY (Name of Purchaser)
Pendleton and vicinity (Distribution System)

MMCF (Millions of Cu. Ft.) @ 14.73 psia

(A)	Annual Gas Requirements (B)	Actual 1950 (C)	Actual 1951 (D)	Actual 1952 (E)	Estimated 1953 (F)	Estimated 1954 (G)	Estimated 1955 (H)	Estimated 1956 (I)	Estimated 1957 (J)
	Sales								
	Residential								
1.	Non-Heating	24.	21.	18.	14.	14.	14.	14.	15.
2.	Space-Heating	29.	54.	74.	85.	111.	121.	127.	132.
3.	Total Residential	53.	75.	92.	99.	125.	135.	141.	147.
	Commercial								
4.	Non-Heating	3.	2.	2.	2.	3.	3.	4.	4.
5.	Space-Heating	5.	8.5	10.	11.	12.	13.	13.	14.
6.	Total Commercial	8.	10.5	12.	13.	15.	16.	17.	18.
7.	Firm Industrial	24.	24.	26.	23.	10.	10.	10.	10.
8.	Interruptible Industrial								
9.	Other Sales	.6	.6	1.	.5	2.	8.	9.	10.
10.	Total Sales	85.6	110.1	131.	135.5	152.	169.	177.	185.
11.	Company Use and Unaccounted-For	13.	10.	3.	11.	12.	13.	14.	15.
12.	Total Send-Out	98.6	120.1	134.	146.5	164.	182.	191.	200.
	Curtailments								
13.	Firm Industrial								
14.	Interruptible Industrial			NONE					
15.	Other								
16.	Total Curtailments								
17.	Total Annual Gas Requirements	98.6	120.1	134.	146.5	164.	182.	191.	200.

Exhibit X-32
Sheet 3 of 7

PANHANDLE EASTERN PIPE LINE COMPANY

Market Data

Peak Day Gas Requirements by Classes of Service

PENDLETON NATURAL GAS COMPANY (Name of Purchaser)

Pendleton and vicinity (Distribution System)

MCF (Thousands of Cu. Ft.) @ 14.73 psia

(A)	Peak Day Gas Requirements (*) (B)	Actual 1950-51 (C)	Actual 1951-52 (D)	Actual 1952-53 (E)	Estimated 1953-54 (F)	Estimated 1954-55 (G)	Estimated 1955-56 (H)	Estimated 1956-57 (I)	Estimated 1957-58 (J)
	Sales								
	Residential								
1.	Non-Heating	198	149	73	111	108	104	109	113
2.	Space-Heating	390	436	572	934	1090	1212	1267	1323
3.	Total Residential	588	585	645	1045	1198	1316	1376	1436
	Commercial								
4.	Non-Heating	17	10	11	14	18	20	22	24
5.	Space-Heating	89	92	88	108	118	124	132	139
6.	Total Commercial	106	102	99	122	136	144	154	163
7.	Firm Industrial	91	90	100	72	90	90	94	99
8.	Interruptible Industrial								
9.	Other Sales	2	2	2	2	57	82	90	98
10.	Total Sales	787	779	846	1241	1481	1632	1714	1796
11.	Increase in Holder Stock								
12.	Company Use and Unaccounted-For	41	35	54	78	90	130	137	144
13.	Total Send-Out	828	814	900	1319	1571	1762	1851	1940
	Curtailments								
14.	Firm Industrial								
15.	Interruptible Industrial			NONE					
16.	Other								
17.	Total Curtailments								
18.	Total Peak Day Gas Requirements	828	814	900	1319	1571	1762	1851	1940
19.	Date	2/2/51	1/29/52	1/5/53					
20.	Mean Temperature	-3°	7°	14°	0°	0°	0°	0°	0°

Note: (*) Day of Maximum send-out of firm gas.

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Exhibit X-32
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PANHANDLE EASTERN PIPE LINE COMPANY

Market Data
Annual Gas Supply

PENDLETON NATURAL GAS COMPANY (Name of Purchaser)
Pendleton and vicinity (Distribution System)

MMCF (Millions of Cu. Ft.) @ 14.73 psia

(A)	Annual Gas Supply (B)	Actual 1950 (C)	1951 (D)	1952 (E)	Estimated 1953 (F)	1954 (G)	1955 (H)	1956 (I)	1957 (J)
	Natural Gas Purchases								
1.	Pipe Line Companies								
	P.E.P.L Co.	98.6	120.1	134.	146.5	164.	182.	191.	200.
2.									
3.	Other Sources								
4.	Total Natural Gas Purchases	98.6	120.1	134.	146.5	164.	182.	191.	200.
5.	Natural Gas Production - Total								
6.	From Underground Storage								
7.	From Holders and Line Pack								
8.	Total Natural Gas Supply	98.6	120.1	134.	146.5	164.	182.	191.	200.
	Manufactured Gas								
9.	Purchases								
10.	Production								
11.	Water Gas, Oil Gas, etc.								
12.	Liquefied Petroleum Gas								
13.	Total Manufactured Gas								
14.	Total Annual Gas Supply	98.6	120.1	134.	146.5	164.	182.	191.	200.

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Exhibit [illegible]
Sheet ___ of ___

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PANHANDLE EASTERN PIPE LINE COMPANY

Market Data
Annual Gas Supply

RICHMOND GAS CORPORATION (Name of Purchaser)
RICHMOND, INDIANA (Distribution System)

MMCF (Millions of Cu. Ft.) @ 14.73 psia

(A)	Annual Gas Supply (B)	Annual 1950 (C)	1951 (D)	1952 (E)	1953 (F)	1954 (G)	Estimated 1955 (H)	1956 (I)	1957 (J)
	Natural Gas Purchases								
	Pipe Line Companies								
1.	P.E.P.L. Co.	863	928	971	1,050	1,135	1,250	1,325	1,380
2.									
3.	Other Sources								
4.	Total Natural Gas Purchases	863	928	971	1,050	1,135	1,250	1,325	1,380
5.	Natural Gas Production - Total	863	928	971	1,050	1,135	1,250	1,325	1,380
6.	From Underground Storage								
7.	From Holders and Line Pack								
8.	Total Natural Gas Supply	863	928	971	1,050	1,135	1,250	1,325	1,380
	Manufactured Gas								
9.	Purchases								
10.	Production								
11.	Water Gas, Oil Gas, etc.								
12.	Liquefied Petroleum Gas								
13.	Total Manufactured Gas								
14.	Total Annual Gas Supply	863	928	971	1,050	1,135	1,250	1,325	1,380

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Sheet 5 of 8

PANHANDLE EASTERN PIPE LINE COMPANY

Market Data
Annual Gas Supply

THE DAYTON POWER AND LIGHT CO. (Name of Purchaser)
New Paris - Hollansburg (Distribution System)

MMCF (Millions of Cu. Ft.) @ 14.73 psia

(A)	Annual Gas Supply (B)	Actual 1950 (C)	1951 (D)	1952 (E)	Estimated 1953 (F)	1954 (G)	1955 (H)	1956 (I)	1957 (J)
	Natural Gas Purchases								
1.	Pipe Line Companies P.E.P.L. Co.	44,163	51,227	50,843	54,950	67,125	75,925	84,125	91,200
2.									
3.	Other Sources								
4.	Total Natural Gas Purchases	44,163	51,227	50,843	54,950	67,125	75,925	84,125	91,200
5.	Natural Gas Production - Total			Not applicable					
6.	From Underground Storage			Not applicable					
7.	From Holders and Line Pack			Not applicable					
8.	Total Natural Gas Supply	44,163	51,227	50,843	54,950	67,125	75,925	84,125	91,200
	Manufactured Gas - Not applicable								
9.	Purchases								
10.	Production								
11.	Water Gas, Oil Gas, etc.								
12.	Liquefied Petroleum Gas								
13.	Total Manufactured Gas			Not applicable					
14.	Total Annual Gas Supply	44,163	51,227	50,843	54,950	67,125	75,925	84,125	91,200

NOTE: The Dayton Power and Light Company purchases approximately 99% of its annual and peak day natural gas supply from the Ohio Fuel Gas Company and the balance from Panhandle Eastern Pipeline Company. The area supplied with gas purchased from Panhandle Eastern Pipeline Company is not interconnected with that service area supplied with gas purchased from the Ohio Fuel Gas Company.

666

C028

(16028)

Item XXXXX by Reference
(Excerpt)

17536

Q. Would your answer be the same with respect to the pipe having 520 pounds working pressure with a safety factor of four? A. It would.

Q. Would it also be the same answer if you had 420 pounds with a safety factor of five? A. It would.

Q. In the event that you constructed either of those three pipes, would it not as a general proposition increase the delivery capacity of the lateral in that area? A. I would think so.

Mr. McGee: That is all I have.

Mr. Stinson: I have just one question.

By Mr. Stinson:

Q. Mr. Hager, did I understand correctly that in response to Mr. McGee's question, you say the only way to do anything about this ten-inch portion of this lateral is to build a new one; that you know of? A. I don't believe I said that.

Q. In your judgment, is the 10-inch portion of this lateral beyond repair, so that in order to do any good, or to increase the capacity, you would recommend that you build a new lateral?

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A. I would recommend that we not spend any more money trying to improve the lateral's carrying capacity, that of the present ten-inch.

Q. Is that because you do not believe that you could repair this lateral so as to substantially increase its capacity? A. I don't believe it would be an economic or wise expenditure of funds.

Q. Do you believe it would be efficatious physically to

(PAGE BLANK)

substantially increase the capacity of the lateral regardless of the economic part of it?

In other words, I would like to know whether or not in your judgment—

Presiding Examiner: The engineer gives his answers somewhat on that basis.

The Witness: I thought I answered those questions.

Presiding Examiner: I thought you had. I thought you made it perfectly clear from the standpoint of getting additional capacity, that it just wouldn't be worth it, and he is saying that as an engineer.

VOL.

III

No. 541

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United States Court of Appeals

FOR THE THIRD CIRCUIT

No. 12,069

MICHIGAN CONSOLIDATED GAS COMPANY, a corporation,
Petitioner

v.

FEDERAL POWER COMMISSION

No. 12,118

THE CENTRAL WEST UTILITY COMPANY

v.

FEDERAL POWER COMMISSION

On Appeal from Orders of the Federal Power Commission

JOINT APPENDIX

Volume III

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(Pleadings)

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United States Court of Appeals

FOR THE THIRD CIRCUIT

No. 12,069

MICHIGAN CONSOLIDATED GAS COMPANY, a corporation,
Petitioner

v.

FEDERAL POWER COMMISSION

No. 12,118

THE CENTRAL WEST UTILITY COMPANY

v.

FEDERAL POWER COMMISSION

On Appeal from Orders of the Federal Power Commission

JOINT APPENDIX

Volume III

(Pleadings)

17670

UNITED STATES OF AMERICA

BEFORE THE FEDERAL POWER COMMISSION

Docket No. G-2433

In the Matter of

PANHANDLE EASTERN PIPE LINE COMPANY

Application for A Certificate of Public Convenience and Necessity

Additional Main Line Capacity and Waverly Storage Project

Comes now Panhandle Eastern Pipe Line Company ("Panhandle") and files this application for the issuance of a Certificate of Public Convenience and Necessity authorizing the construction and operation of certain facilities as hereinafter described.

In support hereof, Panhandle respectfully shows that:

I

The exact legal name of applicant is Panhandle Eastern Pipe Line Company.

II

Panhandle is a corporation organized and existing under the laws of the State of Delaware with its principal offices at 1221 Baltimore Avenue, Kansas City 5, Missouri, and

(2) Broadway, New York-5, New York; Panhandle owns and operates (under Certificates of Public Convenience and Necessity heretofore issued by the Commission) an integrated natural gas pipe line system situated in the States of Texas, Oklahoma, Kansas, Missouri, Illinois, Indiana,

Ohio and Michigan and is a "Natural-Gas Company" as defined in the Natural Gas Act.

III

Panhandle produces natural gas from extensive leasehold acreage located in the States of Texas, Oklahoma and Kansas and purchases natural gas produced in Texas, Oklahoma and Kansas. Its pipe line system extends from Texas to its northern termini in Michigan. In connection with the operation thereof, Panhandle owns facilities appurtenant thereto and is engaged in the transportation and sale of natural gas in interstate commerce (a) for resale for ultimate public consumption for domestic, commercial, industrial and other uses, and (b) directly to industries and others for their own use.

IV

Panhandle's service has been duly authorized by "grandfather" and "non-grandfather" Certificates of Public Convenience and Necessity issued by this Commission.

V

All communications and pleadings in respect to this application are to be sent to each of the following:

Steptoe & Johnson
1100 Shoreham Building
Washington 5, D. C.

Baker & Daniels
810 Fletcher Trust Building
Indianapolis 4, Indiana

Panhandle Eastern Pipe Line Company
120 Broadway
New York 5, New York

Panhandle Eastern Pipe Line Company
1221 Baltimore Avenue
Kansas City 5, Missouri

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VI

Panhandle is filing this application with the Commission for a Certificate of Public Convenience and Necessity authorizing:

(a) The construction and operation of additional main line loop pipe line facilities and additional compressor facilities (as described herein) which will substantially increase the sales capacity of the Panhandle system by approximately 255,000 MCF per day. The addition of the loop pipe line facilities will substantially complete the looping of Panhandle's third main pipe line.

(b) The construction and operation of pipe line and compressor and other appurtenant facilities necessary in conjunction with the operation of the Waverly Storage Field for the underground storage of gas. The facilities pro-

posed to be installed as part of the Waverly Storage Project are expected to produce a peak day deliverability from the storage field of 200,000 MCF. However in the initial stage of development (winter 1955-56) it is expected that peak day deliveries from the storage field will be limited to 150,000 MCF.

(c) The construction and operation of additional lateral pipe line facilities which will enable Panhandle to deliver additional volumes of gas from its main pipe line to the points of delivery of certain of its customers enumerated herein.

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The existing winter peak day sales of deliverability of the Panhandle system is approximately 970,000 MCF per day. The construction and operation of the aforesaid facilities will result in an increase in the peak day sales deliverability of 455,000 MCF per day, thus making Panhandle's total peak day sales deliverability 1,425,000 MCF per day.

The facts as to each of the aforesaid facilities are set forth separately in this application.

VII

Part 1—Additional Main Line Capacity

Panhandle proposes to increase the capacity of its main pipe line system by constructing 294.6 miles of additional loop pipe line so as to substantially complete the third main pipe line of its pipe line system. In addition, it proposes to install additional compressor engines with 113,000 horsepower in compressor stations on its main pipe line system. As indicated above, the construction of the additional loop lines and the installation of the additional compressor engines will increase the main line sales capacity of Panhandle by approximately 255,000 MCF per day.

The following is a schedule of the loop pipe lines which Panhandle proposes to construct, together with the cost thereof:

	Cost
1. 23.3 miles of 30" pipe line between its Liberal Compressor Station and its Greensburg Compressor Station	$ 1,553,400
2. 20.2 miles of 30" pipe line between its Greensburg and Haven Compressor Stations	1,414,600

3. 26 miles of 30" pipe line between its Haven and Olpe Compressor Stations	2,223,300
4. 26.7 miles of 30" pipe line between its Olpe and Louisburg Compressor Stations	2,119,400
5. 26.2 miles of 30" pipe line between its Louisburg and Houstonia Compressor Stations	1,958,300
6. 15.4 miles of 30" pipe line between its Houstonia and Centralia Compressor Stations	1,223,300
7. 18.1 miles of 30" pipe line between its Centralia and Pleasant Hill Compressor Stations	1,594,200
8. 24.9 miles of 30" pipe line between its Pleasant Hill and Glenarm Compressor Stations	1,823,300
9. 26.4 miles of 30" pipe line between its Glenarm and Tuscola Compressor Stations	1,959,200
10. 40.1 miles of 30" pipe line between its Zionsville and Edgerton Compressor Stations	3,113,600

	Cost
11. 26.3 miles of 26" pipe line between its Edgerton Compressor Station and its so-called Michigan Tap Line	1,855,300
12. 20.9 miles of 26" pipe line on its Michigan Tap Line	1,380,600
Contingencies	666,500
Total Cost of Pipe Line Facilities	$22,885,000

The completion of the above loop line facilities will result in an increase in Panhandle's daily sales capacity of 100,000 MCF per day. It is proposed to begin construction of the aforesaid pipe line facilities during the summer

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of 1954, and it is anticipated that the construction will be completed on or before January 1, 1955, so that additional volumes of gas will be available for delivery to Panhandle's customers at that time.

The following is a schedule of the additional compressor engines which Panhandle proposes to install in its compressor stations, together with the cost thereof.

Name of Compressor Stations	Present Installed HP	Proposed Additional HP	Cost of New HP
Liberal	20,600	3,000	$ 854,500
Greensburg	18,800	12,000	2,350,000
Haven	17,500	12,000	2,350,000
Olpe	20,600	10,000	1,990,000
Louisburg	16,000	10,000	1,990,000
Houstonia	17,800	8,000	1,646,000
Centralia	17,400	8,000	1,646,000
Pleasant Hill	17,400	8,000	1,646,000
Glenarm	13,200	4,000	901,000
Tuscola	19,800	8,000	1,500,000
Montezuma	10,700	14,000	2,708,500
Zionsville	15,700	10,000	1,990,000
Edgerton	17,700	6,000	1,318,500
	223,200	113,000	$22,890,500
Contingencies			689,500
Total			$23,580,000

The installation of the additional horsepower will result in an increase in Panhandle's capacity of 155,000 MCF per day. Panhandle expects to install the additional horsepower in its compressor stations during the early part of 1955 so that the 155,000 MCF of additional capacity derived from such installations will be available to Panhandle's customers on or before November 1, 1955.

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There is attached hereto, as Exhibit F-1, a system map indicating Panhandle's existing facilities and the proposed additional pipe line and compressor facilities described above. Attached hereto as G-1 is a flow study of the Panhandle system with the proposed facilities added. Attached hereto, as Exhibit K, is a detailed estimate of the total cost of the proposed pipe line facilities described above.

Part 2—Waverly Storage Project

Panhandle proposes to construct and operate facilities for the storage of natural gas at a point near its main pipe line system in central Illinois near the town of Waverly, Illinois. The storage fields consist of an underground dome field filled with salt water, covering an area of approximately 10,000 acres located in Morgan County, Illinois, approximately three miles from Panhandle's main pipe line.

The development of the Waverly Storage Field for the storage of natural gas was initiated by Central Illinois Light Company ("CILCO"), Peoria, Illinois, one of Panhandle's largest utility customers. Thereafter, in 1952, Panhandle acquired a half interest in the storage field and, together with CILCO, conducted further tests as to the feasibility of the field. On February 1, 1954, Panhandle entered into an agreement with CILCO terminating CILCO's interest in the project as of December 31, 1953, a copy of which agreement is attached hereto as Exhibit X-A5. Such agreement provides (a) that if the storage field proves to be feasible for the storage of large volumes of gas, Panhandle will return CILCO's investment in the project; (b) that in consideration of CILCO terminating its investment in the field so that Panhandle will

be able to operate the storage facilities for the benefit of all its general service and small general service customers, without storage facilities, Panhandle will give CILCO the opportunity to contract for 25 per cent of the maximum deliverability of the storage field (as set forth in Exhibit X-A3, CILCO has agreed, under date of January 18, 1954, to enter into a service agreement with Panhandle providing for a winter contract demand of 150,000 MCF, which contract demand includes 99,900 MCF

present contract demand plus 50,100 MCF additional contract demand which is equal to 25% of the proposed deliverability of the storage field and (c) to enable it to deliver such volumes of gas to CILCO, (and to other customers on the Peoria Lateral) Panhandle has agreed to build additional lateral pipe line facilities on its Peoria lateral pipe line system.

Panhandle plans to develop the Waverly Storage Field in an orderly manner and to operate the same in conjunction with its pipe line system. The facilities proposed to be installed as part of the Waverly Storage Project are expected to produce a peak day deliverability from the storage field of 200,000 MCF. However in the initial stage of the project (winter season 1955-1956) it is contemplated that the peak day delivery from the storage field will be approximately 150,000 MCF. Geological studies and initial tests indicate the feasibility of the project, however, it is proposed to make further tests of the storage field by injecting additional volumes of gas into the field. If such tests establish the workability of the field as a storage field, Panhandle plans to begin the storage of gas by injecting gas into the fields during the remaining summer months of 1954. It is not known at this time whether any gas will be available from the Waverly Storage Field in the Winter 1954-55. There is

attached hereto as Exhibit H-7 a geological study of the Waverly Storage Field.

Panhandle proposes, in conjunction with the Waverly Storage Project, to construct and/or operate the facilities described below. The following is a description of such facilities together with an estimated cost of the project:

Facilities & Costs	*Costs*
1. Construct 3.15 miles of 26" pipe lines extending from Panhandle's main pipe line to said compressor station in order to inject gas in the storage field and withdraw the same therefrom.	$ 272,000
2. Construct 3.20 miles of gathering lines to connect such wells to a compressor station and dehydration plant.	78,000
3. Construct a compressor station and install compressor engines of 4290 HP therein, such engines to be used to inject gas into the field.	1,085,000
4. Install regulating and measuring equipment to measure gas injected into the fields and withdrawn therefrom.	76,500
5. Construct a dehydration plant to dehydrate gas withdrawn from the field.	215,000
6. Drill 20 wells for the underground storage of gas.	800,000
7. Contingencies	76,000
Other Costs	
8. Costs of testing storage fields.	602,000
9. Estimated cost of cushion gas.	1,800,000
10. Leased Acreage.	167,000
Total Cost of Storage Project	$5,171,500

Authorization of the installation and operation of the aforesaid pipe line and compressor facilities is requested in this application.

Part 3—Lateral Line Facilities

Panhandle proposes to build additional lateral line facilities from its main pipe line to the points where several of its customers receive gas deliveries, in order to deliver the additional volumes of gas available as the result of increases in main line capacity and the Waverly Storage Project. Accordingly, authorization of the Commission is also requested in this application for the following loop lateral line facilities:

	Total Cost
1. Peoria Lateral—58.30 miles of 16" pipe line, including three river crossings, which will complete the looping of this lateral pipe line to Peoria, Illinois.	$2,564,000
These facilities will be used to augment deliveries to all customers on the Peoria Lateral, namely, Central Illinois Light Company, Central Illinois Public Service Company, Illinois Power Company, Central Illinois Electric & Gas Company and the City of Morton.	
2. Anderson Lateral—11.50 miles of 18" pipe line, extending from Panhandle's Zionsville Compressor Station in an easterly direction toward Anderson, Indiana.	491,000
These facilities well be used to augment deliveries to companies served from this lateral pipe line, the largest of which is Central Indiana Gas Company.	

3. Greenfield Lateral—5.80 miles of 4" pipe line, extending from Panhandle's Muncie Lateral pipe line in a southerly direction toward Greenfield Indiana. 85,000

These facilities will be used to augment deliveries to Greenfield Gas Company at Greenfield, Indiana.

4. Winchester Lateral—3.30 miles of 6" pipe line, extending from Panhandle's Muncie Lateral pipe line in a northerly direction toward Winchester, Indiana. 62,000

These facilities will be used to augment deliveries to Ohio Valley Gas Company at Winchester, Indiana.

5. Fort Wayne Lateral—8.52 miles of 10" pipe line, extending from Panhandle's main line in a westerly direction toward Fort Wayne, Indiana. 203,000

These facilities will be used to augment deliveries to Northern Indiana Public Service Company at Fort Wayne, Indiana.

6. Tipton Lateral—4.40 miles of 8" pipe line, extending in a westerly direction from Panhandle's main pipe line toward Tipton, Indiana. 102,000

These facilities will be used to augment deliveries to Kokomo Gas Company at Kokomo, Indiana, and Indiana Gas and Water Company at Tipton, Indiana.

7. Clinton Lateral—4.80 miles of 4" pipe line, extending in an easterly direction from Lincoln, Illinois toward Clinton, Illinois.	72,000
These facilities will be used to augment deliveries to Illinois Power Company at Clinton, Illinois.	
8. Contingencies	108,000
Total cost of additional lateral facilities—	$3,687,000

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Panhandle intends to construct a portion of the aforesaid facilities in 1954 and the balance in 1955. It is not possible to state at this time how much of this construction will be completed in 1954.

A detailed estimate of the cost of the aforesaid facilities is set forth in Exhibit K.

VIII

In addition to the main line and Waverly Storage construction program, Panhandle plans to spend approximately $11,420,000 over a period of two years in connection with facilities for the production and gathering of the new gas supply which will be necessary for the new capacity proposed herein. As set forth herein in Exhibit H, such new gas supply will come primarily from the Anadarko Basin. The production and gathering costs consists of the drilling of approximately 80 wells at a total cost of approximately $2,670,000, the construction of approximately 178 miles of gathering lines at an estimated cost of $6,250,000 and the installation of approximately 9,600 horsepower at eight field compressor stations in the Hugoton Field and the Anadarko Basin at a cost of $2,500,000.

IX

The total cost of this expansion program, together with the production and gathering facilities, which are not part of Panhandle's main line system, is approximately $66,750,000 consisting of the following items:

	Amount
Additional Loop Pipe Line Facilities	$22,885,000
Additional Compressor Engines—113,000 HP	23,580,000
Waverly Storage Project	5,171,500
Lateral Lines	3,686,000
Production and Gathering Facilities	11,427,500
Total	$66,750,000

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Of this total amount it is anticipated that approximately $30,000,000 will be spent by Panhandle in 1954 and the balance in 1955.

It is proposed to finance such costs partially out of funds on hand, partially by funds generated by operations, and partially by the issuance in 1954 of approximately $35,000,000 in Debentures to be sold by a public offering made through a group of underwriters. Representatives of underwriting firms have advised Panhandle that in their opinion such a Debenture issue is feasible. It is impossible at this time to set forth the provisions of the Debentures since such matters as price, interest rate, commission and other terms and provisions thereof will be dependent on market conditions existing at the time of the proposed public offering and will be determined through negotiations with such underwriters.

A statement of anticipated cash flow and other required financial information are set forth in Exhibit L.

X

Panhandle plans to dispose of the additional capacity available as the result of the additional facilities proposed in this application as follows:

(a) *Increased Main Line Capacity*

Panhandle plans to dispose of 210,000 MCF per day out of the additional main line capacity by selling the same to East Ohio Gas Company (East Ohio), Ohio Fuel Gas Company (Ohio Fuel) and Michigan Gas Storage Company (Storage Company). It has entered into an agreement with East Ohio dated November 6, 1953 for the purchase of an additional 100,000 MCF per day under Panhandle's

LS-1 Rate Schedule which will increase the contract demand of that company to 185,000 MCF per day. It also has entered into an agreement with Ohio Fuel dated February 8, 1954 for the purchase of an additional 50,000 MCF per day under Panhandle's LS-1 Rate Schedule which will increase the contract demand of that company to 100,000 MCF per day. Copies of these agreements are attached hereto as Exhibits X-A6 and X-A7. Panhandle contemplates disposing of an additional 60,000 MCF per day to Storage Company under Panhandle's G-1 Rate Schedule but arrangements with that company for the purchase and sale of additional gas have not been completed.

Upon the issuance of an order granting Panhandle a Certificate of Public Convenience and Necessity to construct and operate the main line facilities proposed herein, it is contemplated that Panhandle and such customers will enter into service agreements for the above volumes in the form contemplated by Panhandle's tariff.

(b) *Balance of Additional Main Line Capacity and Waverly Storage Capacity*

Panhandle proposes to make the remaining additional main line capacity (approximately 45,000 MCF per day) and the initial capacity resulting from the construction and operation of the Waverly Storage Field (approximately 150,000 MCF deliverability) available to its customers with whom it has service agreements for the purchase of gas under the General (G) and Small General Service (SG) Rate Schedules of its tariff. The main line capacity will serve to meet the additional base load of such customers and the storage facilities

will be used to meet winter requirements of such customers due to space heating loads. These facilities will meet the requirements of the G and SG customers of Panhandle as set forth in Exhibit X-A3. All of such customers are entirely dependent upon Panhandle for their natural gas supply and none of them has underground storage facilities of its own. Studies made by Panhandle indicate that the nature of such customers' business is that they need large volumes of additional winter gas supplies to provide for the needs of their space heating customers and relatively small increases in gas supply during the remaining months. Thus, storage facilities with high winter deliverability are desirable in order to meet the needs of such customers.

In January 1954 Panhandle sent a letter to its G and SG customers (with whom it has entered into service agreements), attached hereto as Exhibits X-A1, together with a form of letter agreement, attached hereto as Exhibit X-A2, requesting them to indicate the contract demand volumes they would be willing to contract for during the unexpired term of their presently effective service agreements with

Panhandle, commencing November 1, 1955. As set forth in Exhibit X-A3 such customers in the aggregate have agreed to contract (in the form of letter attached as Exhibit X-A2) for approximately 815,000 MCF in winter contract demands (or approximately 190,000 MCF in excess of their present winter contract demands) and for smaller contract demands for the remaining months of the year. A tabulation of the proposed new contract demands of all of

Panhandle's customers commencing November 1, 1955, is attached hereto as Exhibits X-A3 and X-A4. Copies of the executed letter agreements with such customers are not attached hereto as exhibits since all of such agreements are uniform and it is contemplated that at an appropriate time prior to commencement of service. Panhandle and such customers will enter into new service agreements for increased contract demands in the form contemplated by Panhandle's tariff.

As additional market information there is attached hereto as a part of Exhibit I, a systemwide estimate in summary form of the volumes of gas (both annual and peak day) of the requirements of Panhandle's customers during the years 1956-1958 (the first three full years following the completion of the facilities), together with actual deliveries for the three years preceding the filing of this application (1951-1953). The information contained in Exhibit I has been obtained from questionnaires completed by such customers (except as noted therein) at Panhandle's request. Attached hereto as Exhibits X-1 through X-44 are copies of the completed questionnaires submitted by such customers. The questionnaires set forth annual and peak day volumes, a classification of customers by number in each area served by the utility, together with estimates of annual load factor, space heating saturation and an

explanation of the various factors used by such customers in the preparation of the estimates. There is also included in Exhibit I a schedule of all Panhandle's direct customers whose estimated consumption will exceed 10,000 MCF monthly or 100,000 MCF annually, together with information as to their peak-day and annual requirements. In the case of all of Panhandle's direct customers

and of a few of Panhandle's small resale customers, (principally small municipalities) the estimates were made by Panhandle.

XI

During the winter season 1955-56, Panhandle will have a peak day sales capacity of 1,375,000 MCF. This peak day capacity will be disposed of as follows:

Resale Customers	
G & SG Customers	815,200
LS Customers—East Ohio & Ohio Fuel	285,000
G—Michigan Gas Storage Company	120,000
Michigan Consolidated Gas Company	87,500
New Resale Customers	9,000
Total Resale Customers	1,316,700
Direct Customers	
National Petro-Chemicals Corporation Hydrocarbon Extraction	29,000
Firm Industrial	28,000
Firm Residential & Commercial	1,300
Total Direct	58,300
Total Peak Day Sales	1,375,000

It is contemplated that of the additional facilities proposed in this application, the loop lines providing addi-

tional capacity of approximately 100,000 MCF per day will be completed on or before January 1, 1955. Panhandle proposes to dispose of this additional capacity for the interim period (approximately January 1, 1955-November 1, 1955) to its limited service and general service customers (with whom it has entered into service agreements), depending on the requirements of such customers, during such period. Because of the uncertainties which are present in connection with the completion of the construction program, no definite proposal or schedule as to the quantities of gas each customer will receive is set forth

at this time.

XII

Panhandle estimates that total gas reserves of approximately 10.6 trillion cubic feet of gas are available to it to supply the requirements of its customers; of such reserves 8.3 trillion cubic feet are owned or controlled through gas purchase contracts by Panhandle itself and 2.3 trillion are controlled by gas purchase contracts of its subsidiary, Trunkline Gas Company (Trunkline).

In addition to the gas supply available to it from the Hugoton and Panhandle fields of Kansas, Oklahoma and Texas, Panhandle has obtained new sources of gas in the Anadarko Basin to enable it to meet the increased requirements of its customers arising out of the new facilities. It is estimated that of such additional supply of gas, approximately one third of such supply will be obtained from Panhandle's owned gas reserves and the balance from gas purchase contracts.

Attached hereto as Exhibit H—Total Gas Supply Data, are schedules of total volumes of proven reserves available to Panhandle, together with maps showing the location of each gas field, and the volumes of gas to be taken

from each field. There is also attached hereto as part of such Exhibit a deliverability study showing the average daily volumes of gas which can be taken from each field.

XIII

There are attached hereto as Exhibit N, pro forma statements, for the first three full years of operation of the proposed facilities, of estimated sales

and annual revenues related to classes of service and customers, together with annual operating expenses classified in accordance with the Commission's Uniform System of Accounts for Natural Gas Companies.

A cost of service study relative to the new facilities proposed herein and a systemwide cost of service study (after the completion of the new facilities) are also included in Exhibits N and P, respectively. Such cost of service studies indicate that as a result of the installation of the new facilities and other increases in cost, particularly in operating expenses and cost of purchased gas, increases in the rates fixed by the Commission in Opinion No. 269 will be necessary.

There is attached hereto as Exhibit P a statement of the rates which Panhandle expects to charge for gas when the new facilities are completed. It is contemplated that such rates will be put into effect in accordance with the provisions of the Natural Gas Act to take effect upon completion of the facilities on or before November 1, 1955.

XIV

There are no contracts or arrangements between Panhandle and any other company or individual for the construction, management, supervision or operation of the facilities proposed herein. It is intended that upon the

issuance of a certificate in this proceeding, contracts will be let on a bid basis to independent contractors unaffiliated with Panhandle for the construction of the facilities. For this reason, the information requested under Exhibit M of the Commission's Rules and Regulations has been omitted.

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XV

It is submitted that the public convenience and necessity permit and require the issuance of a Certificate of Public Convenience and Necessity, by the Commission, authorizing the construction and operation by Panhandle of the facilities proposed in this application.

The construction and installation of the proposed main line facilities will enable Panhandle to meet the increased demands of all of its customers with whom it has entered into service agreements. A great number of such customers have been operating under restrictive orders relating to additional space heating customers, issued by their respective State Commissions. Additional gas from the Panhandle system will enable these customers to add many new space heating customers. Panhandle's customers have indicated a willingness to contract for all of the gas available as a result of the new facilities.

This Commission has on a number of occasions advocated the use of underground storage facilities both as a conservation measure and as a means for the maximum utilization of a natural gas company's pipe line facilities. As indicated herein, the construction and operation of the Waverly Storage Project will enable Panhandle to meet the increasing demands which have been made upon it by its customers, to supply space heating requirements. In addition, the use of storage fields for the purpose of storing gas in the warm months and delivering the same

to customers in the winter months will enable Panhandle to improve the load factor of its pipe line system by storing excess gas available in the warm months.

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The location of a storage field at Waverly will also prove advantageous to Panhandle from an operating standpoint, because during the winter months the requirements of Panhandle's customers located west of Waverly are substantially greater than during the summer months. During periods of low demand, gas can be delivered by Panhandle through existing pipe line facilities to Waverly for storage and, during the heating season, gas stored in the Waverly fields can be used to offset the diminution of pipe line supply at that point due to the space heating requirements of customers served west of Waverly. The storage facilities can also be used advantageously to supply the varying space heating requirements of customers served from the Peoria Lateral facilities which are located near the storage fields. Thus, the Waverly Project will enable Panhandle to operate its pipe line in a most efficient and economical manner.

XVI

No application to supplement or effectuate the proposals made herein need be filed by Panhandle with any other regulatory body.

WHEREFORE, by reason of the premises, Panhandle requests that the Commission issue a Certificate of Public Convenience and Necessity in accordance with the provisions of Section 7 of the Natural Gas Act, as amended,

authorizing the construction and operation of the facilities for which application is made herein.

Respectfully submitted,

PANHANDLE EASTERN PIPE LINE COMPANY

By M. K. HAGER
M. K. Hager
Vice President

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Washington 5, D. C.

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810 Fletcher Trust Building
Indianapolis 4, Indiana

Attorneys for Panhandle Eastern Pipe Line Company

May 18, 1954

17931

UNITED STATES OF AMERICA
BEFORE THE FEDERAL POWER COMMISSION

Docket No. G-2433

In the Matter of
PANHANDLE EASTERN PIPE LINE COMPANY

Petition to Intervene

Comes now Central West Utility Company, and for its Petition to Intervene herein states to the Commission:

A.

i. The Central West Utility Company (exact legal name), is a corporation organized and existing under the

laws of the State of Kansas. It has its principal place of business in Missouri at No. 1009 Baltimore Avenue, Kansas City, Missouri, and is authorized to do and is doing business as a public utility in the States of Kansas and Missouri, under the jurisdiction of the respective state Commissions.

ii. All communications and pleadings in respect to this Petition are to be sent to each of the following:

The Central West Utility Company, 1009 Baltimore Avenue, Kansas City, Missouri
Dick H. Woods, Stinson, Mag, Thomson, McEvers & Fizzell, 9 West 10th Street, Kansas City, Missouri
Lester G. Seacat, 610 Central Trust Building, Jefferson City, Missouri

III. Petitioner has an interest in the subject matter of the above entitled proceedings of such a nature that intervention by it is necessary and appropriate to the administration of the Natural Gas Act, and its participatipn in such proceedings will be in the public interest for the reason that, as is more fully stated hereafter, it is now receiving natural gas service from Panhandle

Eastern Pipe Line Company (its sole source of supply) through and by means of a part of Panhandle's gas transmission system known and hereafter referred to as the "Liberty Lateral", a lateral pipe line running from Panhandle's compressor station at Louisburg, Kansas, along the Missouri-Kansas state line, and through Jackson and Clay Counties in Missouri to a point a short distance north of Liberty, Missouri. The capacity of the Liberty Lateral is not adequate to supply the aggregate present and future maximum day's requirements of the customers of Pan-

handle including this petitioner, now receiving service therefrom so that the public health, safety and welfare have been and will continue to be jeopardized by gas shortages at times of severely cold weather because of the insufficiency and inadequacies of said lateral. In the program for the voluntary enlargement of the Panhandle system and its capacity contemplated by and described in its Application herein, Panhandle has failed to provide for any enlargement or addition to the Liberty Lateral which omission will have the effect not only of limiting and restricting the operations and business of this Petitioner, but aslo, if persisted in, will result in a curtailment and denial of natural gas service to the public in the area served by this Petitioner, that would be detrimental to the public and contrary to the present and future public convenience and necessity. Hence, your Petitioner desires to intervene herein for the purpose of objecting to and protesting against the granting of the prayer of the application that the Commission issue a certificate of public convenience and necessity, authorizing the construction and operation of the facilities described in said Application.

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B.

As grounds for its objection and protest against the granting of the prayer of the Application, Petitioner states:

i. For some years prior to the 4th day of November, 1935, this Petitioner and its predecessor companies owned and operated public utility plants for the distribution of natural gas at retail in Liberty, Smithville, Avondale, Missouri, and their respective environs, which said plants were being supplied with natural gas obtained from local wells. By November 4th, 1935, such local wells had become

depleted to such a point that the supply of natural gas produced therefrom was wholly inadequate to meet the requirements of Petitioners customers. On such date this Petitioner and Panhandle Eastern Pipe Line Company entered into a contract whereby Panhandle agreed to sell and deliver to this Petitioner, and Petitioner agreed to purchase and receive from Panhandle at a point of delivery at or near the corporate limits of Liberty, Missouri, such quantities of natural gas as this Petitioner might require for resale to its customers in Liberty, Smithville, Avondale and their respective environs, such purchases to equal at least seventy-five per cent of Petitioner's total requirements of natural gas for resale and distribution in such service area.

ii. After the inception of service in 1936 under said contract, Panhandle Eastern Pipe Line Company rendered natural gas service to this Petitioner and through it to the public in its service area by means of Liberty Lateral as above described, at first on a partial requirements basis in connection with the local supply and ultimately on a full requirements basis when the supply of local gas was exhausted, so that for a long period of time the petitioner and

the public within its service territory have been and are now wholly dependent upon Panhandle Eastern Pipe Line Company for a supply of natural gas wherewith to maintain gas service within said area.

iii. Service under such contract continued until that contract and all other similar contracts were abrogated by the order of the Federal Power Commission in Dockets G-1116, et al. In the Matters of Panhandle Eastern Pipe Line Company, etc. rendered in connection with Opinion

No. 214, issued June 13, 1951. Upon failure to negotiate a new service agreement in conformity with the F.P.C. Gas Tariff No. 1 of Panhandle Eastern Pipe Line Company in accordance with Opinion No. 214, above mentioned, service is now being rendered to petitioner under and by virtue of Appendix D to the Commission's "Order Making Tariff and Service Agreements Effective, etc." issued March 5, 1952 in F.P.C. Dockets G-1116, et al.

iv. For many years last past the Liberty Lateral has been incapable of transmitting and delivering the volumes of natural gas required by this Petitioner and the other customers of Panhandle who receive service from said Lateral. Notwithstanding that such inadequacy has been well known to Panhandle, Panhandle has failed and refused and continues to fail and refuse to improve said lateral or to apply for authorization to construct and operate additions thereto sufficient to enable it to deliver to this Petitioner and other customers along said Lateral volumes of natural gas adequate to meet the present and future requirements of such customers and particularly of this Petitioner, despite the fact that at various times in the past five years Panhandle has sought and procured authorization to construct, improve, enlarge and operate other laterals for the purpose of delivering natural gas according to the requirements of other of its customers. Upon such facts this Commission, in its Opinion

No. 218 in Docket Nos. G-1116, et al, entitled In the Matters of Panhandle Eastern Pipe Line Company, dated August 31, 1951, found and determined that Panhandle's conduct and course of action with respect to the Liberty Lateral constituted unlawful discrimination in service against its customers on said Lateral and in favor of cus-

tomers of Panhandle on other laterals, and amounted to an undue preference and advantage to some customers and an undue prejudice and disadvantage to customers along the Liberty Lateral, all in violation of the Natural Gas Act. Ever since said finding was made Panhandle has persisted in maintaining, imposing and perpetuating such unlawful discriminations between this petitioner and other customers on said Liberty Lateral on the one hand and on the other customers on other laterals which are part of Panhandle's transmission system.

V. In its pending Application herein Panhandle proposes to continue and to perpetuate the unlawful discriminations in service among customers found and determined to exist by the Commission in Opinion No. 218, as aforesaid, and to create and in the future to maintain and impose other and additional unlawful discriminations against this petitioner and others on said Lateral, and upon the localities and the public served by them, contrary to and in violation of the Natural Gas Act, in that none of the $66,750,000 which Panhandle proposes to spend in voluntarily enlarging its transmission system is to be spent in enlarging or improving the Liberty Lateral. Despite that fact, Panhandle proposes to spend $3,687,000 to enlarge and improve seven laterals in Illinois and Indiana so that deliveries of natural gas to eleven customers in those states, named in the Application, for resale to the public in a large number of localities

and communities will be augmented and the increased and the increasing demands of those of its customers along such laterals with whom it has chosen to enter into service agreements will be met and satisfied. By its proposed outlays described in the Application Panhandle will enable its customers not only on the laterals to be improved in the

enlargement program but upon its entire system except along the Liberty Lateral, to add many new heating customers, notwithstanding the fact that the present and prospective requirements of this Petitioner and other customers similarly situated along the Liberty Lateral already greatly exceed the capability of that facility to transmit and deliver natural gas. Under Panhandle's proposals herein this petitioner, although for many years an entire requirements customer of Panhandle, is wrongfully, and unlawfully denied and deprived of any benefit whatever from the program of voluntary enlargement of Panhandle's facilities described in such Application, and is subjected to continued and further discrimination.

WHEREFORE, premises considered, this petitioner prays:

(1) That it be permitted to intervene and participate herein.

(2) That after hearing upon the Application herein, the Commission find that, with respect to the transportation and sale of natural gas subject to the jurisdiction of the Commission, Panhandle Eastern Pipe Line Company, if authorized by this Commission in a certificate of public convenience and necessity in accordance with Section 7 of the Natural Gas Act, as amended, to construct and operate the facilities described in the application would (a) discriminate against the petitioner by making and granting undue

preferences and advantages to the eleven customers of Panhandle receiving natural gas service from the seven laterals in Illinois and Indiana named in the Application and to all of the persons, firms and corporations constituting the gas consuming public in the service areas supplied by such customers, and (b) subject this petitioner and all

persons, firms and corporations constituting the gas consuming public in its service area and along the Liberty Lateral, to unequal and undue prejudices and disadvantages, and (c) maintain unreasonable differences in service and facilities as between the localities along the Liberty Lateral on the one hand and localities along the seven laterals in Illinois and Indiana, described in the Application, on the other, all contrary to and in violation of Section 4(b) of the Natural Gas Act, and

(3) That for the reasons aforesaid the Application of Panhandle be denied and dismissed.

CENTRAL WEST UTILITY COMPANY

By H. W. RUTLEDGE,
President

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UNITED STATES OF AMERICA
FEDERAL POWER COMMISSION

Docket No. G-2433

In the Matter of
PANHANDLE EASTERN PIPE LINE COMPANY

Petition of the Gas Service Company For Leave to Intervene

To the Honorable, the Federal Power Commission:

The Gas Service Company (hereinafter referred to as "Petitioner") hereby petitions this Commission pursuant to Section 1.8 of the Commission's Rules of Practice and Procedure for an order granting the Petitioner intervention in the above-entitled proceeding and, in support thereof, respectfully shows:

I.

Petitioner is a Delaware corporation with its principal office located in Kansas City, Missouri, and is a public utility engaged in the local distribution of natural gas in the States of Missouri, Kansas, Oklahoma and Nebraska.

II.

Petitioner is a customer of Panhandle Eastern Pipe Line Company (Panhandle), which service by Panhandle is rendered through and by means of a lateral pipeline hereafter referred to as the "Liberty lateral," which extends from Panhandle's compressor station at Louisburg, Kansas, through Jackson and

Clay Counties in Missouri to a point north of Liberty, Missouri.

At the present time there is pending before this Commission an application filed by Panhandle pursuant to Section 7(b) of the Natural Gas Act for an order approving the abandonment of natural gas service rendered by Panhandle to the Cities Service Gas Company (Cities Service), which service is rendered by means of an exchange agreement existing between Panhandle and Cities Service. In pursuance of said exchange agreement, Panhandle delivers natural gas to Cities Service in Johnson County, Missouri, at a delivery point known as the Knobnoster connection where the Carrolton lateral of Cities Service crosses the main pipeline system of Panhandle. It is this delivery which is the subject of Panhandle's application in Docket No. G-2374. The deliveries of natural gas by Cities Service to Panhandle under said exchange agreement are at points in Johnson County, Missouri, at a connection on the Sedalia lateral of Cities Service, and in Jackson County, Missouri, at a connection on Panhandle's "Liberty lateral", sometimes known as the Bannister connection.

There is also pending before the Commission in Docket No. G-1754 an application by Panhandle under Section 7(b) of the Natural Gas Act for an order "approving and authorizing the abandonment by Panhandle of all natural gas service now being rendered by Panhandle to Gas Service." Petitioner is an intervenor in both of the proceedings referred to above.

III.

It is a matter of record that Panhandle has failed to provide for any improvement or enlargement of the "Liberty

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lateral'' and, in effect, has pursued a policy of attempting to restrict and curtail the service of natural gas to Petitioner, all to the detriment of the consuming public and contrary to the present or future public interests.

In the face of Panhandle's refusal and failure to improve the said ''Liberty lateral'' or to apply for authorization to construct and operate additions thereto, this Petitioner and the customers it serves have been discriminated against in favor of service proposed to others by Panhandle.

In its pending application in the above docketed matter Panhandle proposes to continue such unlawful discrimination of service by proposing substantial additions to its pipeline system, without regard, however, to the needs of customers along the ''Liberty lateral'' and in disregard of the rights of the public affected thereby.

It appears that Panhandle proposes an outlay of considerable sums of money to enlarge and improve other laterals connected to its system but apparently steadfastly refuses to perform its obligation to the public by the improvement of the ''Liberty lateral''.

IV.

Petitioner is of the view that the application of Panhandle to abandon service to it is inconsistent with the action of Panhandle in the above docketed matter to improve other laterals on its system and generally to provide for substantial additional peak day capacity on its system.

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V.

Petitioner has an interest in this proceeding which may be directly affected, and which is not adequately repre-

sented by any other party herein and as to which it may be bound by the Commission's action in this matter.

Petitioner therefore requests that it be permitted the right to intervene herein in order to protect its interests as well as the interests of the consuming public served by it.

WHEREFORE, Petitioner prays that it be permitted to intervene herein and be treated as a party to this proceeding, with all rights appropriate to that status.

Respectfully submitted,

THE GAS SERVICE COMPANY

By /s/ CHARLES E. McGEE
Charles E. McGee
Its Attorney

Dated at Washington, D. C.
This 21st day of June, 1954.

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BEFORE THE
FEDERAL POWER COMMISSION

Docket No. G-2433

In the Matter of

PANHANDLE EASTERN PIPE LINE COMPANY

Petition of Michigan Consolidated Gas Company for Leave to Intervene

Comes now Michigan Consolidated Gas Company ("Michigan Consolidated") and pursuant to Section 1.8 of the Federal Power Commission's Rules of Practice and Procedure, respectfully petitions for leave to intervene in the above-captioned matter. In support of this petition, Michigan Consolidated respectfully shows:

I.

Michigan Consolidated is a public utility engaged in the purchase, transportation and distribution of natural gas in various cities and communities in the State of Michigan, including the metropolitan areas of Detroit and Ann Arbor.

Michigan Consolidated purchases from Panhandle Eastern Pipe Line Company ("Panhandle") 125,000 Mcf of natural gas per day at Detroit and 2,000 Mcf per day at Ann Arbor. By reason of these purchases Michigan Consolidated has long been one of Panhandle's largest customers.

II.

On May 18, 1954 Panhandle filed an application for a certificate of public convenience and necessity in the above-captioned matter. This application covers Panhandle's much heralded "expansion" program

and purports to cover an increase of 455,000 Mcf per day in its capacity. Apart from the Waverly storage project, which is still in the experimental stage, this application actually covers an increase in Panhandle's capacity of only 255,000 Mcf per day and proposes a further large increase in rates.

In the application Panhandle assumes that it will receive a 6.75 per cent return on its sales to utilities which are subject to regulation by this Commission and that it will receive an overall return, including its direct sales which are outside the Commission's jurisdiction, of 9.78 per cent in 1956, 9.3 per cent in 1957 and 9.04 per cent in 1958.

The increased capacity proposed is as follows:

(1) Panhandle proposes to install certain loops of its main line to provide an additional 100,000 Mcf per day of capacity by January 1, 1955.

(2) Panhandle proposes to install 113,000 horsepower of additional compression on its main line to provide an additional 155,000 Mcf per day of capacity by November 1, 1955.

While Panhandle proposes to develop the Waverly storage project and to obtain a peak day deliverability of some 200,000 Mcf per day from storage, the application states (pp. 7-8) that this field is an under-ground dome "filled with salt water" and that the "workability" of this field for the storage of natural gas has not yet been determined.

III.

Under this application, Panhandle would increase its charges to Michigan Consolidated at 100 per cent load factor from 23.55 cents

per Mcf (which this Commission approved in its Opinion No. 269, issued on April 15, 1954) to 31.1 cents per Mcf—an increase of 32 per cent.

At the same time, Panhandle proposes to reduce its long standing deliveries to Michigan Consolidated from 127,000 Mcf per day to 87,500 Mcf per day—a reduction of 39,500 Mcf or 31 per cent.

The instant application is thus directly contrary to the prohibition of Section 7(b) of the Natural Gas Act against any abandonment of service as well as the Commission's Opinion and Order in Docket No. G-1725, denying Panhandle authority to partially abandon its existing service to Michigan Consolidated at Detroit.

This application of Panhandle also contravenes the prohibition in Sections 4 and 5 of the Act against any discriminatory or unreasonable differences in service or in rates.

It is respectfully submitted that the foregoing would

preclude this Commission from making the requisite finding under Section 7(e) of the Act that Panhandle "is able and willing properly to perform the proposed acts and service and to conform to the provisions of the Act and the rules and regulations and orders of the Commission thereunder."

IV.

The instant application also shows that Panhandle proposes to increase by 50 per cent the volumes of its direct sales. In 1953 Panhandle sold 20,200,000 Mcf of gas in direct sales and it appears from the application that this will be increased to 30,100,000 Mcf in 1957.

The application shows that Panhandle proposes to make these direct sales to several customers it has not been authorized to serve, including the Mueller Brass Co. to which it commenced service without the prior approval of this Commission in direct violation of the Natural Gas Act and contrary to the condition which this Commission has prescribed in all of Panhandle's certificates since 1946 which prohibit the use of facilities to serve a new customer without the prior approval of the Commission.

As the Commission is aware, it has long been the announced policy of Panhandle to refuse to sell gas on an interruptible basis to its utility customers under rates subject to regulation by this Commission and, instead to sell such gas directly to industrial customers including customers located in the distribution area of the utilities obtaining their gas from Panhandle. This direct sales policy of Panhandle, which has twice been condemned by the Supreme Court, is exemplified by Panhandle's pending application in Docket No. G-1417 for authority to sell to 55,000 Mcf per day to the Ford Motor Company at

Dearborn, Michigan, which has long been one of Michigan Consolidated's industrial customers. Moreover, Panhandle has signed contracts to deliver 24,000 Mcf of gas a day to two plants of the McLouth Steel Corporation which are also located in the Detroit distribution area of Michigan Consolidated.

Panhandle has not yet filed an application with this Commission for authority to make this direct sale and Panhandle has failed to state that it intends to file such an application.

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In addition, on May 4, 1954, it was announced that Panhandle and the Union Gas Company of Canada had signed a 20-year agreement under which Panhandle is to supply Union with an additional 15,500,000 of gas annually for distribution in southwestern Ontario. The filing of Panhandle and the related exhibits are materially deficient in not giving effect to this proposed additional service.

Michigan Consolidated has attempted without success to purchase from Panhandle up to 100,000 Mcf per day on an interruptible basis pursuant to Panhandle's I-1 Rate Schedule and despite the express provision in the Schedule requiring that interruptible gas be offered first to Panhandle's utility customers, Panhandle has refused to sell any interruptible gas to Michigan Consolidated. Michigan Consolidated has a pending complaint in Docket No. G-1379 for an order requiring that Panhandle make such deliveries to Michigan Consolidated. In its application Panhandle shows it proposes to sell no gas under its interruptible rate schedules.

V.

In the light of the foregoing, Michigan Consolidated has a direct and vital interest in this proceeding, which is not adequately represented by the existing parties and as to

which Michigan Consolidated may be bound by the Commission's action in this proceeding.

Michigan Consolidated therefore desires to intervene for the purpose of protecting its interests as they may appear.

WHEREFORE Michigan Consolidated respectfully requests that it be granted leave to intervene in this proceeding with the full rights

of a party including the right to cross-examine witnesses, introduce evidence and be heard in argument, both written and oral.

Respectfully submitted,

MICHIGAN CONSOLIDATED GAS COMPANY
By: /s/ HUGH C. DALY
Hugh C. Daly
Vice President

CHARLES V. SHANNON
Wheat, May and Shannon
520 Shoreham Building
Washington 5, D. C.

OSCAR L. CHAPMAN
Chapman and Wolfsohn
312 Shoreham Building
Washington 5, D. C.

WALTER M. MEEK
Dyer, Angell & Meek
Dime Building
Detroit, Michigan

Attorneys for Michigan Consolidated Gas Company

17999

UNITED STATES OF AMERICA

FEDERAL POWER COMMISSION

Docket G-2433

In the Matter of

PANHANDLE EASTERN PIPELINE COMPANY

Notice of Intervention

To the Honorable, the Members of Said Commission:

Now comes the Michigan Public Service Commission, comprised of John H. McCarthy, Chairman, and Maurice E. Hunt, Commissioner, constituting said Public Service Commission, a statutory regulatory body having jurisdiction under the laws of the State of Michigan over sales and service of natural gas to consumers within the State of Michigan, including direct sales and service to consumers within said state by interstate pipe line companies, and hereby files Notice of Intervention under §§ 1.8 and 1.37(f) of the Federal Power Commission's Rules of Practice and Procedure, and respectfully requests that it be entered upon the Federal Power Commission records as an intervenor in the above proceedings.

MICHIGAN PUBLIC SERVICE COMMISSION

By FRANK G. MILLARD
Attorney General
State of Michigan

and

ROBERT A. DERENGOSKI
Assistant Attorney General

/s/ ROBERT A. DERENGOSKI
Assistant Attorney General
Counsel for the Michigan
Public Service Commission

Lansing, Michigan
Dated: June 23, 1954

Attest:
/s/ S. A. LUND
Its Secretary

18000

CERTIFICATE OF SERVICE

I hereby certify that I today served the foregoing Notice of Intervention by Michigan Public Service Commission in Docket G-2433 upon the following parties by mailing a copy thereof properly addressed, postage prepaid, to each of the following:

Steptoe & Johnson
1100 Shoreham Building
Washington, D. C.

Baker & Daniels
810 Fletcher Trust Building
Indianapolis, Indiana

Panhandle Eastern Pipe Line Company
120 Broadway, New York City, New York

Paul T. Dwyer, Corporation Counsel
James H. Lee, Assistant Corporation Counsel
301 City Hall
Detroit 26, Michigan

Michigan Consolidated Gas Company
415 Clifford Street
Detroit 26, Michigan

Dated at Lansing, Michigan, this 23rd day of June, 1954.

/s/ Robert A. Derengoski

Counsel for the
Michigan Public Service Commission

18001

SUPPLEMENTAL CERTIFICATE OF SERVICE

I hereby certify that I today served a copy of Notice of Intervention by Michigan Public Service Commission In the Matter of Panhandle Eastern Pipe Line Company, Docket No. G-2433, upon the following party by mailing a copy thereof properly addressed, postage prepaid, to said party:

Public Service Commission of Missouri
Jefferson State Office Building
Jefferson City, Missouri

Dated at Lansing, Michigan, this 2nd day of July, 1954.

ROBERT A. DEARNGOSKI

Counsel for the
Michigan Public Service Commission

18004

UNITED STATES OF AMERICA
BEFORE THE FEDERAL POWER COMMISSION

Docket No. G-2433

In the Matter of

PANHANDLE EASTERN PIPELINE COMPANY

Answer of Panhandle Eastern Pipe Line Company to Petition of Central West Utility Company for Leave to Intervene

Comes now Panhandle Eastern Pipe Line Company ("Panhandle") and pursuant to Section 1.8(e) of the Commission's Rules of Practice and Procedure, answers the Petition of Central West Utility Company ("Central West") for leave to intervene herein, which Petition was received by Panhandle on June 21, 1954, as follows:

This proceeding is one in which Panhandle seeks the issuance of a certificate authorizing it to construct and operate certain pipe line and storage facilities which will enable it to increase the peak-day sales deliverability of its pipe line system by approximately 455,000 Mcf. This proposed increase in the capacity of its pipe line system will enable Panhandle to meet the increased demands of the customers with whom it has entered into service agreements.

18005

The petition which Central West has filed seeking intervention in this docket discloses, on Page 2, that Central West proposes to object to, and protest against, the issuance of the certificate of public convenience and necessity which Panhandle seeks in this docket. The detailed recitals in its petition disclose that Central West's opposition to Panhandle's expansion program grows entirely out of the fact that Panhandle has not been required to enlarge its Liberty lateral. The whole matter of service from the Liberty lateral is presently involved in Docket No. G-1754, in which Central West is actively participating. Hearings are in progress in that docket and the service which Central West may obtain from Panhandle would be determined by the ultimate decision there.

Panhandle respectfully submits that it would not be in the public interest to permit Central West to confuse the issues in this docket by a re-trial here of the issues which are to be determined in Docket G-1754; and Panhandle further respectfully points out that the petition to intervene discloses such an effort to be the sole purpose for which Central West seeks intervention.

Wherefore, Panhandle respectfully requests that the petition to intervene filed herein by Central West Utility Company be promptly denied, or, alternatively,

18006

that the participation, if any, by Central West be limited to the matters set forth in Panhandle's Application herein.

Respectfully submitted,

PANHANDLE EASTERN PIPE LINE COMPANY

By /s/ WILLIAM E. MILLER
William E. Miller,
Its Attorney

STEPTOE & JOHNSON
1100 Shoreham Building
Washington 5, D. C.

BAKER & DANIELS
810 Fletcher Trust Bldg.
Indianapolis, Indiana
Attorneys for Panhandle Eastern Pipe Line Company

18040

Filed July 2, 1954

UNITED STATES OF AMERICA
BEFORE THE FEDERAL POWER COMMISSION

Docket No. G-2475

In the Matter of
Panhandle Eastern Pipe Line Company

Application for Authorization to Export Natural Gas

Comes now Panhandle Eastern Pipe Line Company ("Panhandle") and files this application for authorization, pursuant to Section 3 of the Natural Gas Act, to export natural gas from the United States to the Dominion of Canada, pursuant to a contract dated April 21, 1954, be-

tween Panhandle and Union Gas Company of Canada, Limited, ("Union").

In support hereof, Panhandle respectfully shows that:

I

The exact legal name of applicant is Panhandle Eastern Pipe Line Company.

II

Panhandle is a corporation organized and existing under the laws of the State of Delaware with its principal offices at 1221 Baltimore Avenue, Kansas City 5, Missouri, and 120 Broadway, New York 5, New York; Panhandle owns and operates (under Certificates of Public Convenience and Necessity heretofore issued by the Commission) an integrated natural gas pipe line system situated in the States of Texas, Oklahoma, Kansas, Missouri, Illinois, Indiana, Ohio and Michigan and is a "natural-gas company" as defined in the Natural Gas Act.

III

Panhandle produces natural gas from extensive leasehold acreage located in the States of Texas, Oklahoma and Kansas and purchases natural gas produced in Texas, Oklahoma and Kansas. Its pipe line system extends from Texas to its northern termini in Michigan. In connection with the operation thereof, Panhandle owns facilities appurtenant thereto and is engaged in the transportation and sale of natural gas in interstate commerce (a) for resale for ultimate public consumption for domestic, commercial, industrial and other uses, and (b) directly to industries and others for their own use. Panhandle also exports small volumes of gas to Canada under a contract with Union dated November 25, 1944.

IV

Panhandle's service has been duly authorized by "grandfather" and "non-grandfather" Certificates of Public Convenience and Necessity issued by this Commission. Its export service has been authorized by order of this Commission in Docket No. G-612 and the facilities used in connection therewith were authorized by this Commission in Docket No. G-619 and by the issuance of a Presidential Permit dated April 4, 1946.

V

All communications and pleadings in respect to this application are to be sent to each of the following:

Steptoe & Johnson
1100 Shoreham Building
Washington 5, D. C.

John S. L. Yost
William C. Keefe
Panhandle Eastern Pipe Line Company
120 Broadway
New York 5, New York

Baker & Daniels
810 Fletcher Trust Building
Indianapolis 4, Indiana

E. H. Lange
Panhandle Eastern Pipe Line Company
1221 Baltimore Avenue
Kansas City 5, Missouri

18042

VI

Panhandle is presently delivering volumes of gas to Union, not in excess of 5,500,000 Mcf annually during the

months of April through October, under a contract between the parties dated November 25, 1944 (referred to herein as the "1944 Contract"). Authorization to export such volumes was granted by the Commission in Docket Nos. G-612 and G-619. First deliveries of gas under the 1944 Contract were made in 1947; the term extends until December 31, 1965. Deliveries to Union have been made by Panhandle thereunder as follows:

Year	Mcf
1947	37,841
1948	28,089
1949	982,267
1950	2,918,430
1951	3,325,741
1952	5,500,801
1953	5,501,566

Panhandle has the right to make deliveries under the 1944 Contract at any time in its discretion during the months April through October. No firm deliveries are provided for in such contract.

VII

On March 15, 1950, Panhandle and Union entered into a contract (referred to herein as the "1950 Contract") providing for the purchase and sale of 27,500,000 Mcf (subsequently reduced to 18,500,000 Mcf) of gas annually, which volumes included those sold under the 1944 Contract. The 1950 Contract provided for firm deliveries of gas to Union of 25,000 Mcf per day and varying deliveries in the discretion of Panhandle of the remaining volumes of gas provided for under such contract. Following the execution of the 1950 Contract, an application (Docket No. G-1344)

was filed with this Commission for authorization to export such gas under Section 3 of the Natural Gas Act. Such application was denied by the Commission in Opinion No. 218 and the accompanying order of the Commission issued August 31, 1951, in Docket Nos. G-1116, G-1344, et al. The Commission stated that, in view of the requirements of Panhandle's customers in the United States and Panhandle's capacity at that time, no gas was available for export on a firm basis. The denial of the export authorization was without prejudice.

VIII

On April 21, 1954, Panhandle and Union entered into a new contract (herein referred to as the "1954 Contract") providing for the purchase and sale, on an annual basis, of volumes of gas up to 15,500,000 Mcf. per year. The 1954 Contract provides that Panhandle is obligated to deliver the following annual volumes, which are in addition to those to be made under the 1944 Contract:

	MCF		
	Total Annual	Nov.-March	April-Oct.
1st Year	10,500,000	3,500,000	7,000,000
2nd Year	11,500,000	3,800,000	7,700,000
3rd Year	12,500,000	4,200,000	8,300,000
4th Year	13,500,000	4,500,000	9,000,000
5th Year	14,500,000	4,800,000	9,700,000
6th Year	15,500,000	5,200,000	10,300,000

None of the gas to be sold under the 1954 Contract is to besold on a firm basis. Panhandle has the right to curtail or interrupt such deliveries to Union at any time, provided that such interruptions and curtailments do not result in a reduction in deliveries in excess of 12% of the

total volumes deliverable during the months November through March, or in excess of 8% of the total volumes deliverable during the months April

through October. The cumulative deficiency in deliveries permissible as of November 1 in any year during the period of the contract is not to exceed 10% of the total volumes deliverable to Union.

The 1950 Contract between Panhandle and Union which provided for firm gas deliveries and was the subject matter of Docket No. G-1344, above referred to, is specifically cancelled by the 1954 Contract. The 1944 Contract between Panhandle and Union is to continue in effect according to its terms and the volumes to be delivered under the 1954 Contract are in addition to those to be delivered under the 1944 Contract (5,500,000 Mcf annually). For purposes of determining deliveries under each contract, the first 785,715 Mcf delivered in the months April through October up to 5,500,000 Mcf in each year shall be considered to have been delivered under the 1944 Contract and the remaining deliveries are to be under the 1954 Contract.

The term of 1954 Contract is for a period of twenty years from the day of first regular delivery of gas as defined in the contract. Union shall have the right, however, to cancel the same in the event it enters into a contract to purchase gas from the proposed Trans-Canada Pipe Line Co., Ltd., or any other company which is authorized by the Canadian Government to build a pipe line from the Province of Alberta to Eastern Canada. Such right of cancellation may be exercised by Union by giving one year's notice of cancellation, which may not be exercised earlier than one year after the day of first regular delivery of gas under the 1954 Contract. In no event may such right of cancellation to be exercised subsequent to November 1, 1960.

The minimum price of gas to Union under the 1954 Contract is thirty-five cents per Mcf. It is further provided that, if 120% of the

18045

regulated price for firm gas in Michigan under Panhandle's G-1 Rate Schedule shall at any time exceed thirty-five cents, then the price for gas under the contract shall be 120% of such regulated price. Commencing with the second year of the agreement, Union is obligated for each year of the contract to take or, if it does not take, to pay for 75% of the volumes which Panhandle is obligated to deliver under the contract.

Authorization to export additional gas to Union pursuant to the terms of the 1954 Contract is requested in this application.

IX

No new facilities will be necessary to transport the additional gas to Union. Attached hereto as Exhibit F is a map setting forth the existing facilities for service to Union.

The delivery of the additional volumes of gas to Union under the 1954 Contract is not dependent on the completion of Panhandle's new construction program which is the subject of Docket No. G-2433 before this Commission. Panhandle presently is able to perform the contract with Union according to its terms. Additional service to Union will not in any way interfere with service to any of Panhandle's customers in the United States.

X

The natural gas to be exported under the authorization sought herein will be provided partially from Panhandle's reserves (both owned reserves and those controlled through gas purchase contracts) in the Panhandle and Hugoton

fields of Texas, Oklahoma and Kansas and the balance from Panhandle's subsidiary, Trunkline Gas Company, which transports gas from the Gulf Coast Area for delivery to Panhandle in Central Illinois.

18046

There is hereby incorporated by reference in this application Exhibit H in Docket No. G-2433, which is the most recent estimate of Panhandle's gas reserves. As indicated therein, Panhandle's gas reserves are estimated to be approximately 10.6 trillion, which are sufficient to meet the needs of Panhandle's customers, including Union, for a period in excess of twenty years.

XI

The natural gas proposed to be exported by Panhandle will be purchased by Union for storage and for resale to domestic, commercial and industrial customers. In conjunction with the use of storage fields, Union proposes to use a portion of the natural gas so purchased in its existing distribution systems in Windsor, Chatham, London, Sarnia and other smaller communities in Southwestern Ontario and to sell gas to distributors in the Cities of Hamilton, Galt, Brantford, Woodstock, Waterloo, Stratford, St. Thomas, Ingersoll, Kitchener, Guelph, St. Marys, and other communities. Union's underground storage facilities are such that Union will be able to purchase gas on the basis set forth in the 1954 Contract and supply the requirements of its customers.

XII

The facilities to be used in the delivery of natural gas to Union by Panhandle under the authorization herein sought consist of an existing pipeline-crossing under the Detroit River at the International Boundary near Detroit,

Michigan, together with regulating and measuring equipment, the construction, operation, maintenance and connection of which was previously authorized by Presidential Permit dated April 4, 1946, in Docket No. G-611, and by the Commission's order issued April 23,

18047

1946, in Docket No. G-619. These facilities are adequate to transport the additional volumes of gas deliverable under the 1954 Contract to Union.

XIII

The proposed exportation of natural gas will not be inconsistent with the public interest and will not in any way impair Panhandle's ability to render natural gas service because (i) deliveries to Union, for which authorization to export is sought herein, will not interfere with the requirements of any of Panhandle's customers in the United States because of the nature of the service to be rendered to Union. In fact, such deliveries can be made at times of low demand of Panhandle's domestic customers, thus improving the load factor of the Panhandle system; (ii) Panhandle has ample reserves of natural gas available to it to supply its presently foreseeable requirements for a period of at least twenty years; (iii) the volumes of natural gas to be exported are needed by Union and the other Canadian distributors concerned to provide adequate gas service in the areas served by them; and (iv) the supplying of additional volumes of natural gas to Union would be in furtherance of the friendly relations existing between the United States and Canada.

XIV

The following exhibits listed in the Commission's regulations are furnished with this application:

Exhibit A—*Certificate of Incorporation and By-Laws.* These documents were filed by Panhandle as Exhibit A in Docket No. G-2324 and the same are hereby incorporated in this application by reference to the Commission's files.

18048

Exhibit B—*Statement of Affiliation.* This information was filed by Panhandle as Exhibit D in Docket No. G-2324 and the same is hereby incorporated by reference in this application to the Commission's files.

Exhibit C—*Opinion of Counsel.*

Exhibit D—*Copy of contract between Panhandle and Union dated April 21, 1954.*

Exhibit E—This exhibit is not applicable since this is an export application.

Exhibit F—*Map of facilities for service to Union.*

WHEREFORE, by reason of the premises, Panhandle requests that the Commission issue an order authorizing the exportation of gas to Union pursuant to the terms of the contract between Panhandle and Union dated April 21, 1954.

PANHANDLE EASTERN PIPE LINE COMPANY

By LEITH V. WATKINS

Leith V. Watkins

Vice President

STEPTOE & JOHNSON
1100 Shoreham Building
Washington 5, D. C.

BAKER & DANIELS
810 Fletcher Trust Building
Indianapolis 4, Indiana

JOHN S. L. YOST
WILLIAM C. KEEFE
120 Broadway
New York 5, New York

Attorneys for Panhandle Eastern Pipe Line Company

July 2, 1954

18049

STATE OF NEW YORK }
COUNTY OF NEW YORK } ss.:

Leith V. Watkins, being first duly sworn according to law, says that he is Vice President of Panhandle Eastern Pipe Line Company; that he has read the foregoing Application of said Company and is familiar with the contents thereof; that he has executed the same for and on behalf of said Company with full power and authority so to do; and that the facts set forth therein are true and correct to the best of his knowledge, information and belief.

LEITH V. WATKINS
Leith V. Watkins

Subscribed and sworn to before
me this 1st day of July, 1954.

FRANK A. MOYER
Notary Public

(SEAL) Frank A. Moyer
Notary Public, State of New York
No. 24-8044000
Qualified in Kings County
Commission Expires March 30, 1956

18050

EXHIBIT C

STEPTOE & JOHNSON
1100 Shoreham Building
Washington, D. C.

June 17, 1954

Panhandle Eastern Pipe Line Co.
120 Broadway
New York 5, New York

Gentlemen:

You have asked us for our opinion as to whether the exportation of natural gas is within the corporate powers of Panhandle Eastern Pipe Line Company, and whether the Company has complied with Sta laws and with the rules and regulations of State regulatory authorities in the states in which you operate.

As General Counsel for Panhandle Eastern Pipe Line Company, we are familiar with the corporate powers of the Company under its Articles of Incorporation. We are likewise familiar with the Company's activities in the various states in which it operates and the measures which the Company has taken to comply with the laws of those states and with the rules and regulations of the State regulatory authorities.

It is our opinion that:

1. Panhandle Eastern Pipe Line Company has full corporate power to export natural gas to other countries,

2. Panhandle Eastern Pipe Line Company has complied with the State laws and with the rules and regulations of State regulatory authorities in every state in which it operates.

Very truly yours,

STEPTOE & JOHNSON /s/

18051

AGREEMENT

BETWEEN

PANHANDLE EASTERN PIPE LINE COMPANY

AND

UNION GAS COMPANY OF CANADA, LIMITED

FOR

SALE AND PURCHASE OF GAS

Dated as of April 21, 1954

18052

This Agreement made as of this 21st day of April, 1954, between Panhandle Eastern Pipe Line Company, a Delaware corporation (herein called "Panhandle"), and Union Gas Company of Canada, Limited, an Ontario corporation (herein called "Union"),

Witnesseth:

ARTICLE I

DEFINITIONS

1. The word "day" shall mean a period of 24 consecutive hours beginning and ending at 7:00 o'clock a.m., Eastern Standard Time.

2. The word "month" shall mean a period beginning at 7 o'clock a.m. Eastern Standard Time, on the first day of a calendar month and ending at 7:00 o'clock a.m., Eastern Standard Time, on the first day of the following calendar month.

3. The word "gas" shall mean natural gas of the quality specified in Article VIII hereof.

4. The phrase "day of first regular delivery" shall mean the day designated in a notice given pursuant to Article III, Section 2(e) as the day for the first regular delivery of gas hereunder.

ARTICLE II

Representations

1. Panhandle owns and operates a gas transmission pipe line extending from Texas to a point on the international boundary

between the United States and Canada where is connects with a pipe line owned and operated by Union.

2. Panhandle warrants generally the title to all gas to be delivered hereunder and its right to sell such gas. It also warrants that such gas shall be free and clear from all liens and adverse claims.

3. Union owns and operates a gas production, transmission, storage and distribution system in the Province of Ontario, Canada, which connects with Panhandle's pipe line at the aforesaid international boundary. It proposes to cause a pipe line to be constructed connecting with its present system and running to a point in the vicinity of Hamilton, Ontario, Canada, with appropriate lateral lines and connections running into various markets along the way. The proposed pipe line will be operated in conjunction with Union's storage fields so as to facilitate high load factors and the sale of gas for high priority uses.

4. The parties hereto entered into a contract under date of November 25, 1944, for the purchase and sale of volumes of gas up to 5,500,000 Mcf annually, pursuant to which, deliveries of gas are currently being made and a subse-

quent contract between the parties, under date of March 15, 1950, as modified, providing for increased deliveries of gas, has not become effective.

5. It is the intention of the parties that the aforesaid contract dated November 25, 1944, continue in full force and effect, that the aforesaid contract dated March 15, 1950, be cancelled and that a new contract be entered into for the purchase and sale of additional volumes of gas over and above the volumes provided for under the aforesaid November 25, 1944, contract.

ARTICLE III

Sale and Delivery

1. In reliance upon the foregoing representations and in consideration of the mutual covenants herein contained, Panhandle agrees to sell and deliver gas to Union for resale, for storage, or for

any use whatever by Union, and Union agrees to purchase and receive gas from Panhandle subject, in each case, to all the terms and conditions hereof.

2. Panhandle shall begin regular deliveries to Union upon the happening of all the following events:

(a) Final approval of this Agreement by the Federal Power Commission or any governmental authority of the United States or Canada having jurisdiction, and the issuance by such Commission or authority of all export or import licenses or permits of any nature which are requisite to the performance of this Agreement.

(b) The acceptance by both Panhandle and Union of any conditions imposed by the Federal Power Commission or any other governmental authority on the perform-

ance of this Agreement, such acceptance to be evidenced by notices given by each party to the other within 90 days from the entry of the order imposing such conditions.

(c) The receipt of all other governmental approvals which, in the opinion of counsel for Panhandle and counsel for Union, are required for the performance of this Agreement.

(d) The receipt by Panhandle of written notice from Union stating that Union is ready to accept regular delivery of gas hereunder, which notice shall be given within 18 months after the happening of the events specified in sub-sections (a), (b) and (c) above. During such 18-months' period, the parties shall construct all necessary facilities and prepare for the delivery and acceptance of gas hereunder.

(e) The subsequent receipt by Union of a written notice from Panhandle specifying the day of first regular delivery of gas hereunder, which day shall be not more than 60 days after the day upon which Panhandle receives the notice from Union specified in sub-section (d).

The obligations of Panhandle to deliver and of Union to receive gas hereunder are expressly conditioned upon the happening of all the above events, and Union shall have no obligation to construct a pipe line or make any other preparations to take delivery of gas hereunder until after the occurrence of the events specified in sub-sections (a), (b) and (c).

18055

ARTICLE IV

Term

The term of this Agreement shall be for a period of twenty years from the day of the first regular delivery of gas hereunder. In the event that Union (or any company

of which Union owns a majority of the voting stock) enters into a contract with Trans-Canada Pipe Lines, Limited (or any other company which may be authorized by the Canadian Government to transport natural gas from the Province of Alberta to eastern Canada), for the purchase of a supply of gas substantially as great as or greater than the volumes purchased hereunder, Union shall have the right to cancel and terminate this Agreement upon one years written notice to Panhandle, given not earlier than one year after the day of first regular delivery hereunder. The right of termination provided for in this Article must be exercised within one year following the commencement of delivery of natural gas to the Toronto, Ontario, area by the proposed pipe line from Alberta to eastern Canada and in no event later than November 1, 1960.

ARTICLE V

Quantity and Rate of Delivery

1. The base annual volume of gas deliverable hereunder shall be 15,500,000 Mcf. Subject to the provisions of Sections 3, 4 and 5 of this Article, Panhandle shall be obligated to deliver said base volume during the entire term of this Agreement, except that during the first five years following the day of the first regular delivery Panhandle shall be obligated to deliver only the following annual volumes:

First year	10,500,000 Mcf
Second year	11,500,000 Mcf
Third year	12,500,000 Mcf
Fourth year	13,500,000 Mcf
Fifth year	14,500,000 Mcf

18056

The aforesaid volumes of gas to be delivered hereunder are in addition to the volumes to be delivered under the

contract between the parties dated November 25; 1944. During the period April through October in each year (for the remaining period of the term of the November 25, 1944 contract between the parties), the first 785,715 Mcf of gas delivered by Panhandle to Union in each month (up to a total of 5,500,000 Mcf of gas in any year) shall be considered to be delivered under the November 25, 1944 Contract.

2. It is contemplated that, subject to the provisions of this Article V, yearly deliveries of gas shall be made hereunder as follows:

	MFO		
Year	November 1— March 31, Inc.	April 1— October 31, Inc.	Total Yealy Volumes
1st	3,500,000	7,000,000	10,500,000
2nd	3,800,000	7,700,000	11,500,000
3rd	4,200,000	8,300,000	12,500,000
4th	4,500,000	9,000,000	13,500,000
5th	4,800,000	9,700,000	14,500,000
6th and Succeeding Years	5,200,000	10,300,000	15,500,000

Except as provided in Sections 3 and 4 of this Article, deliveries of the volumes recited in this Section shall be made as nearly as possible at a uniform daily rate.

3. Panhandle shall have the right to curtail or interrupt deliveries of gas to Union hereunder at any time. Such curtailments or interruptions shall not, however, reduce the volumes deliverable hereunder in excess of the following:

(a) During the five (5) month period, November 1 through March 31, inclusive, in an amount of not more than 12% of the total volumes deliverable in such period;

(b) During the seven (7) month period, April 1 through October 31, inclusive, in an amount of not more than 8% of the total volumes deliverable in such period.

The aforesaid reductions in the rate of delivery permissible hereunder shall not operate to create a cumulative deficiency on November

1 of any year in excess of 10% of the annual volume deliverable hereunder during the preceding year.

If the day of first regular delivery hereunder is not a November first, the maximum deficiency allowable under this Section on the following November first shall be the pro rata portion of the aggregate deficiencies allowable under Section 3 of this Article.

4. Union shall not be obligated to take delivery from Panhandle of more than 55,000 Mcf of gas in any one day under this Agreement.

5. Until the second year of this Agreement, Union shall not be obligated to pay for any gas made available to it by Panhandle, but not taken by Union. Beginning with the second year of this Agreement (which for purposes of this Section commences on the second November first following the day of first regular delivery of gas hereunder), and in each year thereafter during the term of this Agreement, Union shall be obligated to take and pay for, or, if not taken, to pay for, at the price set forth in Article XI herein, 75% of the volumes of gas Panhandle is obligated to deliver under Section 1 of this Article after deducting from such volumes any deficiency in deliveries by Panhandle under Section 3 of this Article.

The amount, if any, payable by Union in any year for gas not taken, but which Union is obligated to take under this Section 5, shall be added to the bill sent by Panhandle

to Union for gas delivered in the month of October, provided that Union shall not be obligated to pay any amount for gas not taken pursuant to the take or pay for provisions of this Section 5 until December 20th of each year.

ARTICLE VI

Delivery and Possession of Gas

1. Panhandle shall deliver gas to Union hereunder by means of the existing connection between the pipe lines of the two companies constructed pursuant to the contract of November 25, 1944. The point of delivery shall be the point at which the international boundary between the United States and Canada intersects the Detroit River

pipe line crossing constructed pursuant to such contract, and title, possession, custody and control of all gas shall pass from Panhandle to Union at such point of delivery. Before gas passes the point of delivery, Panhandle shall be responsible for any loss caused by fire, explosion, leakage, break-in-the-line, and the like, as well as for any damage to Union or to third parties caused by such fires, explosion, leakage, or anything whatever connected with the gas, its transmission, its sale or delivery. After the gas passes the point of delivery, Union shall similarly be responsible for such loss or damage.

2. Each party shall indemnify and save harmless the other party from any and all claims, causes of action or damage of any sort arising out of the maintenance or operation of the property or equipment of the indemnifying part or out of its title, possession, custody or control of the gas under Section 1 of this Article, it being the intention of the parties that the point of delivery of the gas shall be the point of division of responsibility between them.

ARTICLE VII

Pressure

1. Panhandle agrees to use due care and diligence to deliver gas to Union at such uniform pressure as Union may require, but not less than 260 pounds to the square inch gauge, except during such extraordinary periods (not to exceed 21 days during any year) as Panhandle is engaged in maintenance operations requiring the shutting down of compressor units or requiring the depressuring of pipe lines for the purpose of cleaning, repairing or performing other maintenance operations on such lines.

2. Union agrees to install, operate and maintain, at its own expense, such regulating devices as may be necessary to regulate the pressure of the gas after delivery to Union.

ARTICLE VIII

Quality

1. The gas delivered hereunder shall be natural gas, subject to the following:

(a) Panhandle may extract or permit the extraction of moisture, helium, natural gasoline, butane, propane, or other hydrocarbons (except methane) or inerts from said natural gas.

(b) Panhandle may increase or decrease the heat content of said natural gas before delivery thereof to Union, provided that such increase or decrease does not result in a total heating value above 1050 nor below 950 British Thermal units per cubic foot.

(c) Panhandle may subject or permit the subjection of said natural gas to compression, cooling, cleaning or other

processes to such extent as may be required in its transmission from the wells to the point of delivery.

2. Panhandle agrees that the gas delivered hereunder shall be merchantable, and insofar as practicable:

(a) Shall be commercially free from solid or liquid matter, dust, gum, or gum-forming constituents;

(b) Shall not contain more than 1 grain of hydrogen sulphide per 100 cubic feet;

(c) Shall not contain more than 20 grains of total sulphur per 100 cubic feet;

(d) Shall not contain an amount of moisture exceeding that corresponding to saturation at the temperature and pressure of the gas in the pipe line at a point approximately 50 feet in advance of the meter inlet header located at or near the point of delivery, and water shall not be present in liquid phase.

ARTICLE IX

Measurements

1. The sales unit of the gas deliverable by Panhandle to Union shall be one thousand cubic feet (Mcf) on the measurement basis specified below.

2. The volume and total heating value of the gas delivered hereunder shall be determined as follows:

(a) The unit of volume, for the purpose of measurement and for the determination of total heating value shall be 1 cubic foot of gas saturated with water vapor at a temperature of 60 degrees Fahrenheit and an absolute pressure of 14.73 pounds per square inch.

(b) The total heating value of the gas, per cubic foot, shall be determined by taking the arithmetic average of the heating value as recorded by the recording calorimeter of Panhandle located at its Detroit Measuring Station or at such other place as may be agreed upon between the parties. The arithmetic average for each month of the calorimeter recordings shall be used in computing heating value.

(c) The average absolute atmospheric pressure shall be assumed to be 14.4 pounds to the square inch, irrespective of actual elevation of the location of the point of delivery above sea level or variations in such atmospheric pressure from time to time.

(d) The temperature of the gas passing the meters shall be determined by the continuous use of a recording thermometer so installed that it may properly record the temperature of the gas flowing through the meters. The arithmetic average of the temperature recorded each 24-hour day shall be used in computing gas volumes.

(e) The specific gravity and relative humidity of the gas delivered hereunder shall be determined, by approved methods, at the beginning of delivery of gas and with such reasonable frequency thereafter as is found expedient in practice.

(f) The deviation from Boyle's Law of the gas delivered hereunder shall be determined, by approved methods, at the beginning of delivery of gas and with such reasonable frequency thereafter as is found expedient in practice.

ARTICLE X

Measuring Equipment

1. Panhandle will install, maintain and operate at its own expense at that point on its transmission facilities which it believes

to be practicably nearest to the point of delivery, a meter or meters and other necessary measuring equipment by which the volume of gas delivered hereunder shall be measured.

2. If line loss due to breakage or abnormal leakage occurs between Panhandle's meter and the point of delivery, i.e., while the gas is still in the possession of Panhandle as provided in Article VI of this Agreement, the amount of such line loss shall be deemed not to have been delivered.

3. Union may install, maintain and operate, at its own expense, at a point on its transmission facilities determined to be practicably the nearest to the point of delivery, such check measuring equipment as it shall desire, provided that such equipment shall be so installed as not to interfere with the operation of Panhandle's measuring equipment. Panhandle shall have access to such check measuring equipment at all reasonable hours, but the reading, calibrating and adjusting thereof and the changing of charts shall be done only by Union.

4. Each party shall have the right to be present at the time of any installing, reading, cleaning, changing, repairing, inspecting, testing, calibrating, or adjusting done in connection with the other's measuring equipment, and each party shall advise the other of any intended major maintenance operation sufficiently in advance in order that the other party may conveniently have its representative present. The records from such measuring equipment shall remain the property of the owner, but each party, upon request, will submit to the other its records and charts, together with calculations therefrom, for inspection and verification, subject to return within 10 days after receipt thereof.

5. All installations of measuring equipment used in connection with deliveries hereunder shall be made in such manner as to permit an accurate determination of the quantity of gas delivered and ready verification of the accuracy of measurement. Reasonable care shall be exercised by each party in the installation, maintenance and operation of pressure regulating equipment so as to avoid, so far as

practicable, any inaccuracy in the determination of the volume of gas delivered hereunder.

6. In the event Panhandle's meter is out of service, or registering inaccurately, the volume of gas delivered hereunder shall be estimated as follows:

(a) By using the registration of any check meter or meters if installed and accurately registering in accordance with the provisions of Section 3 of this Article.

(b) If there be no check meter or if any check meter is not registering accurately, then by correcting the error if the percentage of error is ascertainable by calibration, test, or mathematical calculation.

(c) If an estimate cannot be made under either subparagraph (a) or subparagraph (b) above, then by computation based on volumes delivered under similar conditions during periods when Panhandle's meter was registering accurately.

7. Panhandle shall verify the accuracy of its measuring equipment at reasonable intervals, and, if requested in the presence of representatives of Union, but Panhandle shall not be required to verify the accuracy of such equipment more frequently than once in any 30-day period. In the event either party shall notify the other that it desires a special test of any measuring equipment, the parties shall cooperate to effect such test properly.

8. If, upon test, any measuring equipment, including recording calorimeter, is found to be in error not more than 2 percent, previous recordings of such equipment shall be considered correct in computing deliveries hereunder; but such equipment shall be adjusted at once to record accurately. If, upon test, ny measuring equipment shall be found to be inaccurate by an amount exceeding 2 per cent, at a recording corresponding to the average hourly rate of flow for the period since the last preceding test, then any previous recordings of such equipment shall be corrected to zero error for any period which is known definitely or agreed upon, but in case the period is not known definitely or agreed upon, such correction shall be for a period extend-

ing over one-half of the time elapsed since the date of last test, not exceeding a correction period of 16 days.

9. Each party shall preserve for a period of at least 6 years all test data, charts and other similar records.

ARTICLE XI

Price

1. All gas sold and purchased hereunder shall be paid for in coin of the United States of America at a price of thirty-five (35) cents per Mcf, which price shall be the minimum price hereunder regardless of all adjustments hereinafter mentioned; provided further that if 120% of the regulated price of firm gas sold by Panhandle in the State of Michigan to utilities under the effective G-1 Rate Schedule (or equivalent schedule applicable to general service customers in the State of Michigan) of Panhandle's FPC Tariff, computed at 100% load factor, shall at any time, or from time to time, during the term hereof, be an

amount in excess of thirty-five (35) cents per Mcf, then the price for gas sold hereunder shall be 120% of the regulated price. The term, "regulated price," as used herein is hereby defined to mean that price which is authorized (after judicial review, if any) under the provisions of the Natural Gas Act (52 Stat. 833, 15 U.S.C. Paragraphs 717-717W).

2. In the event that an increase in the price provided in Panhandle's G-1 Rate Schedule (or equivalent schedule applicable to general service customers in the State of Michigan) of Panhandle's FPC Tariff is made effective by Panhandle under the provisions of Section 4(e) of the Natural Gas Act, the following procedure shall be observed:

(a) Panhandle shall bill Union on the basis of the increased price provided in such rate schedule, pending final establishment of the new regulated price under the Natural Gas Act.

(b) Until the new regulated price is finally established, however, Union shall not be obligated to pay more than the price in effect under this Agreement immediately preceding the effective date of the increase in price in such rate schedule.

(c) Within 30 days after final establishment of a new regulated price, Union shall be obligated to pay Panhandle the difference between the price paid by Union under sub-section (b) above and 120% of the new regulated price, retroactive to the effective date of the new regulated price under the Natural Gas Act.

(d) Upon request of Panhandle, Union shall, as of the effective date of any increase in price in the G-1 Rate Schedule (or equivalent schedule applicable to general

service customers in the State of Michigan) of Panhandle's FPC Tariff, in accordance with the provisions of Section 4(e) of the Natural Gas Act, furnish Panhandle with an undertaking satisfactory to Panhandle, conditioned upon Union's paying to Panhandle the retroactive amount under sub-section (c) above.

3. If, during any calendar month of the life of this Agreement the arithmetic average total heating value of the gas delivered or available to Union hereunder is less than 975 British thermal units per cubic foot or more than 1,025 British thermal units per cubic foot, the base price specified in Section 1 above shall be decreased in proportion to the decrease below 975 British thermal units per cubic foot or increased in proportion to the increase above 1,025 British thermal units per cubic foot.

ARTICLE XII

Billing

1. Panhandle shall render bills to Union on or before the tenth day of each month far all gas delivered hereunder during the preceding month.

2. Both Panhandle and Union shall have the right to examine, at reasonable times, books, records and charts of the other to the extent necessary to verify the accuracy of any statement, charge, or computation made under or pursuant to any of the provisions of this Agreement.

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ARTICLE XIII

Payments

1. Subject to the provisions of Article XI, Section 2, Union agrees to pay Panhandle at Panhandle's designated office, on or before the twentieth day of each month, for

the gas delivered hereunder during the preceding month, as billed by Panhandle in its statement to Union for such month, according to the measurements, computations and prices herein provided.

2. Should Union fail to pay the amount of any bill for gas delivered hereunder when such amount is due, as herein provided, interest thereon shall accrue at the rate of 6 per cent per annum from the due date until the date of payment. If such failure to pay continues for 30 days after payment is due, Panhandle, in addition to any other remedy it may have hereunder or otherwise, may suspend further delivery of gas until such amount is paid; provided, however, that if Union, in good faith, shall dispute the amount of any such bill or parts thereof and shall pay to Panhandle such amount as it concedes to be correct and at any time thereafter within 30 days of a demand made by Panhandle shall furnish a good and sufficient surety bond, in amount and with sureties satisfactory to Panhandle, conditioned upon the payment of any amount ultimately found due upon such bill after a final determination which may be reached either by agreement or judgment of the courts, as may be the case, then Panhandle shall not be entitled to suspend further delivery of gas unless and until default be made in any of the conditions of such bond.

3. If presentation of a bill by Panhandle is delayed after the tenth day of the month, then the time of payment shall be extended accordingly unless Union is responsible for such delay.

4. In the event that an error is discovered in the amount billed in any statement rendered by Panhandle to Union, such error shall be adjusted within 30 days of the determination thereof, provided that claim therefor shall have been made within 60 days from the date of discovery of

such error, but, in any event, within 12 months from the date of such statement.

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ARTICLE XIV

Force Majeure

1. Neither party shall be liable in damages under any clause of this Agreement to the other for any act, omission or circumstance occasioned by, or in consequence of, any acts of God, strikes, lockouts, acts of the public enemy, wars, blockades, insurrections, riots, epidemics, landslides, lightning, earthquakes, fires, storms, floods, washouts, arrests and restraints of rulers and peoples, civil disturbances, explosions, breakage or accident to machinery or lines of pipe, temporary failure of gas supply, the order of any court or governmental authority which has been resisted in good faith by all reasonable legal means, and any other cause, whether of the kind herein enumerated, or otherwise, not within the control of the party claiming suspension and which, by the exercise of due diligence, such party is unable to prevent or overcome.

2. Such causes or contingencies affecting the performance of this Agreement by either party, however, shall not relieve it of the liability in the event of its concurring negligence or in the event of its failure to use due diligence to remedy the situation and remove the cause in an adequate manner and with all reasonable dispatch, nor shall such causes or contingencies affecting the performance of this Agreement relieve either party from its obligations to make payments of amounts then due hereunder.

ARTICLE XV

Assignments

1. Either party may assign or pledge this Agreement under the provisions of any mortgage, deed of trust, in-

denture or similar instrument which it has executed or may execute hereafter; otherwise, neither party shall assign this Agreement or any of its rights hereunder unless it shall first have obtained the consent of the other.

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2. Any corporation which shall succeed by purchase, merger or consolidation to the properties, substantially as an entirety, of Union or Panhandle, shall be entitled to the rights and shall be subject to the obligations of its predecessor in title under this Agreement.

ARTICLE XVI

Status of Existing Contracts

1. The Contract between the parties dated November 25, 1944, shall continue in full force and effect in accordance with its terms.

2. The Contract between the parties dated March 15, 1950, as amended, under which no deliveries have been made, is hereby cancelled.

ARTICLE XVII

Arbitration

In the event of any claim or demand against either Union or Panhandle with respect to which there is a dispute as to responsibility for the gas or facilities involved, either Union or Panhandle may demand in writing that the facts material to the question of responsibility be submitted to arbitration; thereupon, within 10 days after such demand, Union and Panhandle shall each name a disinterested arbitrator and such arbitrators shall agree upon a disinterested third party as a third arbitrator. The dispute in question shall be submitted to the arbitrators so appointed and the written, signed decision of a majority

of said arbitrators in respect of the facts material to the question of responsibility shall be final and binding upon Union and Panhandle without prejudice to the right of either of them to deny or dispute liability upon any other ground.

Operations under this Agreement shall continue, without prejudice, during the pendency of any such arbitration, and the expense of such arbitration shall be borne one-half by Union and one-half by Panhandle.

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ARTICLE XVIII

Miscellaneous

1. No modification of the terms and provisions hereof shall be or become effective, except by the execution of supplementary written contracts.

2. No waiver by either party of any one or more defaults by the other in the performance of any provisions of this Agreement shall operate or be construed as a waiver of any future default or defaults, whether of a like or of a different character.

3. Except as herein otherwise provided, any notice, request, demand, statement or bill provided for in this Agreement or any notice which either party may desire to give to the other shall be in writing and shall be considered as duly delivered when mailed by registered mail to the post office address of the party intended to receive the same, as the case may be, as follows:

Panhandle Eastern Pipe Line Company
120 Broadway
New York, N. Y.

Union Gas Company of Canada, Limited
Chatham, Ontario
Canada

or to such other address as either party shall designate by formal written notice to the other. Routine communications, including monthly statements and payments, shall be considered as duly delivered when mailed by either registered or ordinary mail.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be signed by their respective officers thereunto duly authorized and their respective corporate seals to be hereto affixed and attested

by their respective Secretaries or Assistant Secretaries, the day and year first above written.

PANHANDLE EASTERN PIPE LINE COMPANY

By FRED H. ROBINSON

Vice-President

(CORPORATE SEAL)

ATTEST:

LEITH V. WATKINS

Secretary

UNION GAS COMPANY OF CANADA, LIMITED

By DAVID P. ROGERS

President

(CORPORATE SEAL)

ATTEST:

F. PALIN

Secretary

Note

Page 1079 is on
Card 22.

Note

Page 1079 is on card 22.
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18166

UNITED STATES OF AMERICA

BEFORE THE FEDERAL POWER COMMISSION

Docket No. G-2433

In the Matter of

Panhandle Eastern Pipe Line Company

Answer and Objection to Application of Panhandle Eastern Pipe Line Company for a Temporary Certificate of Public Convenience and Necessity

Comes now Michigan Consolidated Gas Company (Michigan Consolidated) in opposition to the application by Panhandle Eastern Pipe Line Company (Panhandle) for the issuance of a Temporary Certificate of Public Convenience and Necessity authorizing the construction and operation of certain facilities.

I

Michigan Consolidated is a public utility engaged in the purchase, transportation and distribution of natural gas in various cities and communities in the State of Michigan, including the metropolitan areas of Detroit, Ann Arbor, Grand Rapids and Muskegon. Michigan Consolidated purchases from Panhandle 125,000 Mcf of natural gas a day at Detroit and 2,000 Mcf a day at Ann Arbor. By reason of these purchases Michigan Consolidated has been, and will continue to be, one of Panhandle's largest customers.

II

This second application of Panhandle for a temporary certificate to construct certain facilities is based upon a complete distortion of the clear and unequivocal language used by the Federal Power Commission in denying Panhandle's first request.

In notifying Panhandle by telegram of its denial of the first application the Commission said:

"Panhandle Eastern Pipe Line Company's request for temporary authority in Docket No. G-2433 is hereby denied *because the request does not come within the purview of the authority of this Commission to grant. . . .*" (Emphasis supplied).

Panhandle takes this clear statement of the Commission's authority and attempts to twist its meaning by saying that "the Commission's telegram to Panhandle . . . indicates doubt on the part of the Commission as to its power to issue the Temporary Certificate . . ." Certainly there is no doubt that the Commission found it has no authority to grant Panhandle's application. Yet Panhandle deliberately creates a non-existent doubt and then uses it as a basis to reargue a request which has already been denied.

III

As will be shown later, there is no doubt that the Commission is without legal authority to grant Panhandle's application for a temporary certificate. Even if it had the authority to do so, however, the Commission could not issue such a certificate in view of Panhandle's own uncertainties as to the adequacy of its gas supply.

Counsel for Panhandle has contended that the producers of natural gas must promptly submit themselves to the jurisdiction of the Federal Power Commission in order to provide a legal gas supply for an interstate pipe line and before such producers "can even do business in a lawful manner." If the views of Panhandle are correct, there is considerable doubt as to the adequacy of Panhandle's gas supply to provide the present service to existing customers and even greater doubt as to whether

Panhandle has any gas available for its proposed expansion.

18168

Panhandle's claim that it has an adequate gas supply is completely inconsistent with its position taken during the proceedings in the certificate application of American Louisiana Pipe Line Company, et al (Docket No. G-2306) in which Panhandle argued that this Commission is without authority to issue a certificate of public convenience and necessity to a pipe line company until the Commission had received certificate applications from its gas producers. Of course the Commission is well aware of the position taken by Michigan Consolidated and American Louisiana on this legal point.

In its original application in Docket No. G-2433, Panhandle indicates that a substantial portion of the gas reserves necessary to support its expansion program are available as a result of gas purchase contracts. In Section XII of its application Panhandle states:

"In addition to the gas supply available to it from the Houston and Panhandle fields of Kansas, Oklahoma and Texas, Panhandle has obtained new sources of gas in the Anadarko Basin to enable it to meet the increased requirements of its customers arising out of the new facilities. It is estimated that of such additional supply of gas, approximately one third of such supply will be obtained from Panhandle's owned gas reserves *and the balance from gas purchase contracts.*"

On July 23, just a week before the filing of this latest application for a temporary certificate, Mr. Harry Littman, counsel for Panhandle, made the following statement in the American Louisiana certificate case:

"If as a group, the producer-suppliers (of American Louisiana) remain a part of this project, they have to submit to the Federal Power Commission jurisdiction appro-

priate applications for certificates of public convenience and necessity and to the rate regulations by the Federal Power Commission.

"If, as a group, they don't choose to submit to such jurisdiction, the present applicants have no gas supply. If some do and some don't, the extent

of the gas supply will depend, of course, upon which producer-suppliers elect to remain a part of this project and file the necessary applications." (Tr. 3995-3996)

The producers who are to supply gas to Panhandle for its additional facilities have not filed applications for certificates of public convenience and necessity with this Commission. In the words of Panhandle's own counsel, therefore, there is no indication that Panhandle has an adequate gas supply.

Indeed, under Panhandle's own interpretation of the rules of this Commission, it is impossible to issue a temporary certificate or even to conduct hearings on Panhandle's original application until all its producers have filed for certificates of public convenience and necessity.

IV

Panhandle goes to considerable length in its revived application to attempt to prove that the Commission has the authority to issue temporary certificates under the provisions of Section 7 (c) of the Natural Gas Act. In this argument Panhandle is merely fighting windmills, for there is no disputing the fact that the Commission may issue temporary certificates under certain circumstances.

Panhandle conveniently ignores, however, the fact that Section 7 (c) of the Act specifically provides that "the Commission may issue a temporary certificate *in cases of emergency*. . . ." The Panhandle application does not even

claim that an emergency exists. On the contrary, Panhandle contends that the Commission should issue a temporary certificate because Panhandle is the only pipe line which seeks to serve the markets and because the facilities involved in its application "constitute a relatively small addition to its system." Even if it is granted that both of these facts are true, they do not constitute an emergency and do not provide the Commission with any legal basis for issuing a temporary certificate.

Panhandle also argues that a temporary certificate should be issued because "its customers have indicated a willingness to contract for all of the gas available as the result of the new facilities proposed to be constructed." The fact that these customers have "indicated a willingness" to buy more gas certainly does not constitute an emergency which would give this Commission authority to issue a temporary certificate.

As Michigan Consolidated stated previously, there is nothing unusual about the fact that Panhandle's customers need additional gas. This is a chronic condition upon the Panhandle system and results from Panhandle's persistent refusal to expand its facilities to serve the needs of its utility customers while at the same time it is attempting to sell large volumes of gas directly to industrial consumers and export gas to Canada.

In this connection, Panhandle has filed an application with this Commission (Docket No. G-2475) to export 15.5 billion cubic feet of gas annually to the Union Gas Company of Canada, Limited, in which it states:

"The delivery of the additional volumes of gas to Union under the 1954 contract is not dependent on the completion of Panhandle's new construction program which is the subject of Docket No. G-2433 before this Commission. Panhandle presently is able to perform the contract with

Union according to its terms. Additional service to Union will not in any way interfere with service to any of Panhandle's customers in the United States."

Panhandle apparently feels it will have no difficulty supplying more gas to Union at the unregulated rate of 35 cents a thousand cubic feet, but it claims that only the issuance of a temporary certificate will permit it to provide more gas at regulated rates to utility companies in the United States. It would appear that any "emergency" which would require the issuance of a temporary certificate is a direct result of Panhandle's own actions.

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In an effort to support its application Panhandle states that prior to case of *Algonquin Gas Transmission Company* v. *Federal Power Commission*, the Commission issued a temporary certificate to Michigan Wisconsin Pipe Line Company in Docket No. G-1302. The facts in that case, however, were not at all similar to those in the instant Panhandle application. During the time that hearings on the Michigan Wisconsin application were in progress the Commission authorized the company to proceed with the construction of two compressor stations "at its own risk." The Commission did not issue a temporary certificate to Michigan Wisconsin for the operation of these facilities until nearly two months after the hearings in Docket G-1302 were concluded and 13 days after the Commission heard oral argument in the case. In contrast to this, Panhandle's original certificate application has not even been noticed for hearing.

V

Panhandle has the audacity to contend in its application that this Commission should issue a temporary certificate because Panhandle's representatives held a meeting with

representatives of the Commission Staff with respect to the gas reserves relating to the facilities proposed in the original application.

Panhandle claims "it was not even suggested" at this meeting that Panhandle's reserves were not adequate and if then argues that such silence should be interpreted as complete endorsement of the adequacy of gas supply. Panhandle is indeed asking the Commission to adopt a novel procedure, which has no regard to due process of law, when it seeks a certificate upon the basis of a private conference in which Staff members are required to voice objections, or their silence will be considered as consent.

VI

Panhandle's second application for a temporary certificate lists the names of a number of customers in an attempt to show how Panhandle proposes to divide the increased capacity in the winter of 1954-55. Panhandle fails to give

any indication of the source of gas for these companies in future years if Panhandle does not succeed in its efforts to create an underground gas storage field in a salt dome "filled with water." Virtually all of the capacity resulting from the looping of Panhandle's main line, which is the subject of this application, will be used in future years to serve East Ohio Gas Company, Ohio Fuel Gas Company and Michigan Gas Storage. Other customers only get more gas in future winters only if Panhandle develops the Waverly storage project.

As we pointed out in our previous objection to the issuance of a temporary certificate, Panhandle itself has doubts as to whether this Waverly storage experiment will be successful. In its original application Panhandle stated:

"It is proposed to make further tests of the storage field by injecting additional volumes of gas into the field. If such tests establish the workability of the field as a storage field, Panhandle plans to begin the storage of gas. . . ."

As we said before and must repeat again, if the tests fail to establish the workability of the storage fields the customers that Panhandle proposes to serve this winter will have no gas available in future years.

VII

It must be noted by the Commission that certain statements made by Panhandle, under oath, in its first application are completely inconsistent with those made in this second request and there is no explanation for this discrepancy.

In its first application, filed on June 10, 1954, Panhandle went to considerable length to explain that its request for a certificate must be granted —

immediately if the proposed construction was to be completed in time to provide service during the 1954-55 winter season. On this point the application said:

"Past construction experience of Panhandle indicates that all construction should be completed on or before November 15th in order to avoid the difficulties caused by frequent bad weather prevalent on the Panhandle system after that date. Thus, in view of the steel situation and weather conditions, Panhandle believes that authorization must be granted on or about June 15, 1954, if the loop lines are to be completed in time for service to Panhandle's customers in the winter period 1954-1955."

On June 30, this Commission properly notified Panhandle that its application for a temporary certificate was denied. Panhandle waited for an entire month after receiving this notification and then filed another application approximately six weeks after the June 15 deadline. In this second application Panhandle claims:

"If such certificate is granted in the near future, it is believed the loop lines can be completed in time for service in the winter season 1954-55."

It is difficult to determine which statement the Commission is to believe. If the facts set forth in the first application are correct, Panhandle cannot hope to complete construction in time to provide additional gas to its customers during the coming winter season. In that event Panhandle is merely attempting to obtain a temporary certificate by subterfuge and avoid a full and complete hearing on its original application.

If, however, the statement contained in the second application is true, Panhandle misrepresented the facts in its first request. Certainly such inconsistency does not provide this Commission with the proper basis for the granting of a temporary certificate, even if it had the authority to do so. Of course in this case such authority does not exist.

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WHEREFORE, Michigan Consolidated respectfully requests that the Commission again refuse to issue a Temporary Certificate of Public Convenience and Necessity to Pan-

handle for the construction and operation of certain loop pipe lines.

Respectfully submitted,

MICHIGAN CONSOLIDATED GAS COMPANY

By: /s/ HUGH C. DALY
Hugh C. Daly
Vice President

CHARLES V. SHANNON
Wheat, May and Shannon
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Dime Building
Detroit, Michigan

Attorneys for Michigan Consolidated Gas Company

18185

BEFORE THE
FEDERAL POWER COMMISSION

Docket No. G-2475

In the Matter of

PANHANDLE EASTERN PIPE LINE COMPANY

Petition of Michigan Consolidated Gas Company for Leave to Intervene

Comes now Michigan Consolidated Gas Company ("Michigan Consolidated") and pursuant to Section 1.8 of the Federal Power Commission's Rules of Practice and Procedure, respectfully petitions for leave to intervene in opposition to the above-captioned matter. In support of this petition, Michigan Consolidated respectfully shows:

I.

Michigan Consolidated is a public utility engaged in the production, purchase, transportation, distribution and sale of natural gas in various cities, towns, villages and townships within the State of Michigan. For convenience in description, these activities may be said to be carried on in eight districts, namely, Detroit, Ann Arbor, Grand Rapids, Muskegon, Mount Pleasant, Greenville-Belding, Big Rapids and Pipeline Districts.

Michigan Consolidated purchases 125,000 Mcf of natural gas daily from Panhandle Eastern Pipe Line Company ("Panhandle") at Detroit and 2,000 Mcf daily at Ann Arbor. By reason

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of these purchases Michigan Consolidated has long been one of Panhandle's largest customers.

II.

All correspondence and communications regarding this petition are to be addressed to each of the following:

Henry Tuttle, President
Michigan Consolidated Gas Co.
415 Clifford Street
Detroit 26, Michigan

Hugh C. Daly, Vice President
Michigan Consolidated Gas Co.
1523 L Street, N. W.
Washington, D. C.

Charles V. Shannon
Wheat, May and Shannon
520 Shoreham Building
Washington 5, D. C.

Walter M. Meek
Dyer, Angell & Meek
2103-13 Dime Building
Detroit 26, Michigan

III.

On July 2, 1954, Panhandle filed an application in the above-captioned matter for an order, pursuant to Section 3 of the Natural Gas Act, authorizing the exportation of annual volumes of natural gas up to 15,500,000 Mcf per year from the United States to the Dominion of Canada for sale to Union Gas Company of Canada, Limited ("Union"), for a period of twenty years.

In its application Panhandle states that it has entered into an agreement with Union dated April 21, 1954, providing for the purchase and sale, on an interruptible basis, of an annual volume of gas up to 15,500,000 Mcf per year at a minimum price of 35¢ per Mcf, said volume to be in

addition to deliveries of up to 5,500,000 Mcf per year being presently made under contract between Panhandle and Union dated November 25, 1944, for which authorization was granted by the Commission in Docket Nos. G-612 and G-619.

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Panhandle states in its application that none of the gas to be sold to Union under the 1954 agreement is to be sold on a firm basis and that it may curtail or interrupt deliveries to Union at any time.

Panhandle alleges that it has ample natural gas reserves available and that it can make the deliveries of gas to Union with its existing facilities.

IV.

On the basis of Panhandle's own representations, the instant application is in direct violation of Panhandle's filed F.P.C. Gas Tariff and the Commission's Opinion No. 274 and accompanying order of July 28, 1954. If Panhandle has excess gas available it must sell such gas to its present customers in accordance with its effective gas tariff.

First Revised Sheet No. 28 to Panhandle's F.P.C. Gas Tariff, Original Volume No. 1, provides that whenever Panhandle has gas available for sale in excess of that necessary to meet the firm and interruptible contract volumes, which it has been authorized to deliver in specific dockets, Panhandle shall offer not less than 20% of such gas to buyers which own or control storage. Not less than one-half of the remaining excess gas must be offered for contract on a non-discriminatory basis to all of Panhandle's buyers.

The Commission is aware that Michigan Consolidated has for some time sought unsuccessfully to purchase up to

100,000 Mcf per day of gas on an interruptible basis from

Panhandle. The Commission's recent Opinion No. 269 in Docket Nos. G-1116, *et al.*, recognized the availability of Michigan Consolidated as a market for excess gas on Panhandle's system. Michigan Consolidated owns and controls storage and it has repeatedly informed Panhandle and this Commission that it is ready, willing and able to contract for its proportionate share of any gas Panhandle may offer under its interruptible rate schedules.

Panhandle, however, has consistently refused to comply with its filed tariff and has refused to sell interruptible gas to any of its utility customers, including Michigan Consolidated. Instead, Panhandle has resorted to numerous devices to avoid doing so, as the Commission found to be the case in its Opinion No. 274. In addition, Panhandle is currently seeking in Docket No. G-1725 to reduce its deliveries to Michigan Consolidated at Detroit by 37,500 Mcf per day.

This proposed sale of gas to Union is but another attempt by Panhandle to obtain extra unregulated profits by violating its gas tariff.

Michigan Consolidated respectfully submits that Panhandle's first duty lies in meeting the demands of its domestic customers within the limits of its available gas supply and system capacity, whether those demands are for firm or interruptible service. Panhandle must meet the requirements of its domestic markets before it can be permitted to deliver gas to markets in foreign countries.

Panhandle proposes in its application to export excess gas to Union through existing facilities which admittedly

by-pass the City of Detroit. From the standpoint of physical operation of the Panhandle system, there is no reason why Panhandle should not sell this excess gas to Michigan Consolidated at Detroit, under the interruptible rate schedules prescribed by this Commission.

Panhandle's application for authority to export gas for sale to Union in the instant docket is thus a clear and outright violation of its F.P.C. Gas Tariff, and is contrary to the public interest and should be denied.

V.

Because the sale is to be made in Canada the rates proposed to be charged by Panhandle for the gas sold to Union are not subject to this Commission's jurisdiction. The large profits which Panhandle desires to receive from this sale will not become a part of the regulated earnings of the pipe line company and cannot be considered by this Commission in determining just and reasonable rates for the gas which Panhandle sells to utilities in the United States. For all practical purposes of rate regulation, there is no difference between Panhandle's proposed sale to Union and a direct sale to industry at rates not subject to the Commission's jurisdiction. In either case, Panhandle seeks to profit from an unregulated sale at the expense of the gas consuming public and its utility customers, including Michigan Consolidated.

If the 15,500,000 Mcf of natural gas which Panhandle seeks to export annually to Union were sold instead to Panhandle's utility customers in the United States, the revenues which Panhandle would receive from such sales could be used by the Commission to reduce Panhandle's rates to these utility customers. Of course such reduc-

tions would benefit all of the consumers served by Panhandle's utility customers. This is well illustrated by the Commission's Opinion No. 269 in which the sale of available interruptible gas to Michigan Consolidated under Panhandle's I-1 Rate Schedule was assumed in determining Panhandle's cost of service.

Every cubic foot of the 15,500,000 Mcf sold annually by Panhandle to Union will inevitably result in both the utility customers of Panhandle, including Michigan Consolidated, and the general public paying higher rates than they would otherwise have to pay for Panhandle gas.

VI.

In the light of the foregoing Michigan Consolidated has a direct and vital interest in the above-captioned matter which is not and cannot be adequately represented by the existing parties, and Michigan Consolidated may be bound by the Commission's action in the proceeding.

Michigan Consolidated, therefore, desires to intervene in said Docket No. G-2475 for the purpose of opposing in all respects Panhandle's application for authority to export natural gas in direct violation of Panhandle's filed gas tariff,

and for the further purpose of protecting the interests of Michigan Consolidated as they may appear.

WHEREFORE, Michigan Consolidated respectfully requests that it be granted leave to intervene in Docket No. G-2475 with the full rights of a party including the right to present

evidence, cross-examine witnesses and be heard in brief and oral argument.

Respectfully submitted,

MICHIGAN CONSOLIDATED GAS COMPANY

By

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UNITED STATES OF AMERICA
FEDERAL POWER COMMISSION

Docket No. G-2475

In the Matter of

PANHANDLE EASTERN PIPE LINE COMPANY

Notice of Intervention

TO THE HONORABLE, THE MEMBERS OF SAID COMMISSION:

Now comes the Michigan Public Service Commission, comprised of John H. McCarthy, Chairman, and Maurice E. Hunt, Commissioner, constituting said Public Service

Commission, a statutory regulatory body having jurisdiction under the laws of the State of Michigan over sales and service of natural gas to consumers within the State of Michigan, including direct sales and service to consumers within said state by interstate pipe line companies, and hereby files Notice of Intervention under §§ 1.8 and 1.37(f) of the Federal Power Commission's Rules of Practice and Procedure, and respectfully requests that it be entered upon the Federal Power Commission records as an intervenor in the above proceedings.

MICHIGAN PUBLIC SERVICE COMMISSION

By FRANK G. MILLARD
Attorney General
State of Michigan

and

ROBERT A. DERENGOSKI
Assistant Attorney General

By /s/ ROBERT A. DERENGOSKI
Assistant Attorney General

Lansing, Michigan,
Dated: August 23, 1954

Attest:
/s/ S. A. LUND
Its Secretary

Business Address:
504 Lewis Cass Bldg.
Lansing 13, Michigan

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BEFORE THE

FEDERAL POWER COMMISSION

Docket No. G-2433

In the Matter of

PANHANDLE EASTERN PIPE LINE COMPANY

Application of Michigan Consolidated Gas Company for Rescission of Temporary Certificate or Rehearing and Stay

Comes now Michigan Consolidated Gas Company ("Michigan Consolidated") and, pursuant to Section 19 of the Natural Gas Act and Section 1.34 of the Federal Power Commission's Rules of Practice and Procedure, hereby applies for rescission or, in the alternative, for rehearing and stay of the Commission's telegraphic order of September 2, 1954, purporting to grant Panhandle Eastern Pipe Line Company ("Panhandle") . . . "temporary authority pursuant to Section 7 of the Natural Gas Act to construct the approximately 294.6 miles of pipeline necessary to increase its sales capacity by 100,000 Mcf per day as more fully described in its application for temporary authorization filed June 10, 1954."

Michigan Consolidated will show that the action of the Commission in granting a temporary certificate to Panhandle was in error because:

(1) No emergency of any kind existed, whereas the Natural Gas Act requires a substantial and genuine emergency as a prerequisite to the granting of relief.

(2) The law restricts the granting of a temporary certificate to special and unusual circumstances and obviously does not permit under the guise of an "emergency" the authorization of a normal and routine expansion program of the kind characteristic of the rapidly growing natural gas industry.

(3) No facts exist and no showing has been made by Panhandle to establish compliance with the basic statutory standards and regulatory precedents of the Commission with respect to gas supply, markets and other vital matters.

The Commission did not make any finding on these or other essential elements. Indeed, it made no findings at all and none are possible on the application as presented.

(4) Panhandle has not shown that it is "willing" to "conform to the precedents of the Act and the requirements, rules and regulations of the Commission thereunder." On the contrary Panhandle has established itself as unwilling to obey the Commission's regulatory authority. Panhandle is thus not a "qualified applicant" for a certificate.

(5) In an expansion program of this character by Panhandle, Michigan Consolidated and other interested parties are entitled as a matter of fairness and of law to an opportunity for a hearing so that the facts and merits of the application may be determined.

I.

Michigan Consolidated is a public utility engaged in the purchase, transportation and distribution of natural gas in various cities and communities in the State of Michigan, including the metropolitan areas of Detroit and Ann Arbor.

Michigan Consolidated purchases from Panhandle 125,000 Mcf of natural gas per day at Detroit and 2,000 Mcf per day at Ann Arbor. By reason of these purchases Michigan Consolidated has long been one of Panhandle's largest customers.

On May 18, 1954, Panhandle filed an application with this Commission for a certificate of public convenience and necessity in the above-captioned matter. While this application purports to cover an increase of 455,000 Mcf per day in Panhandle's capacity, apart from the experimental Waverly storage project the application actually covers an increase in Panhandle's capacity of only 255,000 Mcf per day; it proposes a further large increase in rates, a reduction of Panhandle's present deliveries to Michigan Consolidated and an overall decrease in the volumes of gas to be delivered by Panhandle in Michigan.

In the application Panhandle indicates it will receive a 6.75 per cent return on its sales subject to regulation by this Commission and that it will receive an overall return, including its direct sales; the revenues from which are outside the Commission's jurisdiction, of 9.78 per cent in 1956, 9.3 per cent in 1957 and 9.04 per cent in 1958.

The increased capacity proposed is as follows:

(1) Panhandle plans to install certain loops of its main line to provide an additional 100,000 Mcf per day of capacity.

(2) Panhandle intends to install 113,000 horsepower of additional compression on its main line to provide an additional 155,000 Mcf per day of capacity.

Under this application, Panhandle would increase its charges to Michigan Consolidated at 100 per cent load factor from 23.55 cents per Mcf (which this Commission approved in its Opinion No. 269, issued on April 15, 1954) to 31.1 cents per Mcf—an increase of 32 per cent. Of course, an equally large increase in rates is proposed to be exacted from Panhandle's other customers as well.

At the same time, Panhandle proposes to reduce its long standing deliveries to Michigan Consolidated from 127,000 Mcf per day to 87,500 Mcf per day—a reduction of 39,500 Mcf or 31 per cent.[1]

The application also shows that Panhandle proposes to increase by 50 per cent the volumes of its direct sales. In 1953 Panhandle sold 20,200,000 Mcf of gas in direct sales and it appears from the application that this will be increased to 30,100,000 Mcf in 1957.

As the Commission is aware, it has long been the announced policy of Panhandle to refuse to sell gas on an interruptible basis to its utility customers under rates subject to regulation by this Commission and, instead, to seek large extra unregulated profits by selling such gas directly to industrial customers located in the distribution area of the utilities obtaining their gas from Panhandle. This direct sales policy of Panhandle has twice been condemned by the Supreme Court[2] and is contrary to this Commission's Opinion No. 274 and order issued July 28, 1954, in Docket No. G-2035, et al.

In addition to repeated attempts to invade the distribution areas of its utility customers to make direct industrial sales, Panhandle on July 2, 1954, filed an application in Docket No. G-2475 to export and sell to Union Gas Company of Canada an additional 15,500,000 Mcf of gas annually

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[1] The instant application is thus directly contrary to the prohibition of Section 7(b) of the Natural Gas Act against any abandonment of service as well as the Commission's Opinion and Order in Docket No. G-1725, denying Panhandle authority to partially abandon its existing service to Michigan Consolidated at Detroit. This application of Panhandle also contravenes the prohibition in Sections 4 and 5 of the Act against any discriminatory or unreasonable differences in service or in rates.

[2] *Panhandle Eastern Pipe Line Company* v. *Public Service Commission of Indiana*, 332 U.S. 507; *Panhandle Eastern Pipe Line Company* v. *Michigan Public Service Commission*, 341 U.S. 329.

for distribution in southwestern Ontario. This gas is to be sold at rates unregulated by this Commission and Panhandle has failed to offer this gas to its utility customers in the United States as required by its tariff on file with this Commission.

Michigan Consolidated has attempted without success to purchase from Panhandle up to 100,000 Mcf. per day on an interruptible basis pursuant to Panhandle's I-1 Rate Schedule. Despite the express provision in the Schedule requiring that interruptible gas be offered to Panhandle's utility customers, Panhandle has refused to sell any interruptible gas to Michigan Consolidated. Michigan Consolidated has a pending complaint in Docket No. G-1379 for an order requiring Panhandle to make such deliveries to Michigan Consolidated. In its application Panhandle shows it proposes to sell no gas under its interruptible rate schedules.

In the light of the foregoing, Michigan Consolidated has a direct and vital interest in this matter and on June 21, 1954, Michigan Consolidated filed a petition for leave to intervene.

II.

Panhandle, in filing its expansion application on May 18, 1954, did not allege nor attempt to show the existence of any "emergency" and Panhandle did not request nor suggest the issuance of a temporary certificate. Its reticence is not without significance for, as shown later, if any emergency actually existed it must have been well known to Panhandle when the application was filed.

On June 1, 1954, the Commission published a notice of this application and directed that protests or petitions to intervene could be filed on or before June 21, 1954.

Prior to the expiration of the period covered by the Commission's notice and less than a month after Panhandle filed the application, Panhandle, on June 10, 1954, filed an application for a "temporary" certificate to authorize the construction of the 294.6 miles of pipeline loops at an estimated cost of $22,885,000. This application, which was not served upon any of Panhandle's customers, requested that the Commission issue such authorization on or about June 15, 1954, with no notice to the interested parties or opportunity for hearing.

Michigan Consolidated learned of this application for a temporary certificate only through newspaper reports and on June 21, 1954, Michigan Consolidated sent a telegram to the Commission opposing such application. Thereafter, on July 2, 1954, Michigan Consolidated filed a detailed statement of its objections to Panhandle's application for a temporary certificate.

By telegraphic order of June 30, 1954, the Commission denied Panhandle's application for a temporary certificate as follows:

> "PANHANDLE EASTERN PIPE LINE COMPANY'S REQUEST FOR TEMPORARY AUTHORITY IN DOCKET NO. G-2433 IS HEREBY DENIED BECAUSE THE REQUEST DOES NOT COME WITHIN THE PURVIEW OF THE AUTHORITY OF THIS COMMISSION TO GRANT AND, FURTHER, BECAUSE UNCERTAINTIES AS TO ADEQUACY OF GAS SUPPLY AND SPECIFIC MARKETS TO WHICH GAS MAY BE DELIVERED APPEAR TO REQUIRE HEARING BEFORE CONSTRUCTION IS COMMENCED. THIS IS WITHOUT PREJUDICE TO SUCH DISPOSITION AS THE RECORD MAY REQUIRE.
>
> LEON M. FUQUAY, SECRETARY
> FEDERAL POWER COMMISSION"

Panhandle did not apply for rehearing on such telegraphic order. Instead, Panhandle, despite the alleged "emergency", waited until a month had passed and on

July 30, 1954, it filed another application for a temporary certificate. Michigan Consolidated on August 6, 1954, promptly filed its objections to the second application for a temporary certificate.

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Although there had not been any change in the facts or the law since the Commission on June 30, 1954 denied Panhandle's first application for a temporary certificate, the Commission by its telegraphic order of September 2, 1954, granted a temporary certificate to Panhandle as follows:

> "PANHANDLE EASTERN PIPE LINE COMPANY IS HEREBY GRANTED TEMPORARY AUTHORITY PURSUANT TO SECTION 7 OF THE NATURAL GAS ACT TO CONSTRUCT THE APPROXIMATELY 294.6 MILES OF PIPELINE NECESSARY TO INCREASE ITS SALES CAPACITY BY 100,000 Mcf PER DAY AS MORE FULLY DESCRIBED IN ITS APPLICATION FOR TEMPORARY AUTHORIZATION FILED JUNE 10, 1954. AUTHORIZATION TO OPERATE THE SUBJECT FACILITIES IS RESERVED PENDING A DETERMINATION BY THE COMMISSION AS TO THE DISPOSITION OF SUCH INCREASED CAPACITY REQUIRED BY THE PUBLIC INTERST. THIS IS WITHOUT PREJUDICE TO SUCH ULTIMATE DISPOSITION OF THE DOCKET NO. G 2433 APPLICATION AS THE RECORD MAY REQUIRE.
>
> LEON M. FUQUAY, SECRETARY
> FEDERAL POWER COMMISSION"

III

In granting a temporary certificate to Panhandle the Commission purported to act under Section 7(c) of the Natural Gas Act which provides that "the Commission may issue a temporary certificate *in cases of emergency*, to assure maintenance of adequate service or to serve particular customers." (italics added.)

Section 157.17 of the Commission's Regulations in turn provides that applications for temporary certificates "shall state clearly and specifically the exact character of the emergency, the proposed method of meeting it, and the

facts claimed to warrant issuance of a temporary certificate."

Despite the foregoing, Panhandle in its applications did not allege or show the existence of any emergency which would require the issuance of a temporary certificate. On the contrary, Panhandle merely contended that

it could provide additional gas to certain customers for the coming winter of 1954-55 but Panhandle's own statements conclusively show that the Commission's issuance of the temporary certificate on September 2, 1954 will *not* provide any increased capacity for this coming winter.

In the first application for a temporary certificate, which Panhandle filed on June 10, 1954, Panhandle stated that "authorization must be granted on or about *June 15, 1954*, if the loop lines are to be completed in time for service to Panhandle's customers in the winter period 1954-1955." (Italics added.)

On June 30, 1954 the Commission denied this application and Panhandle then waited a month and on July 30, 1954—some six weeks after the emphasized deadline of June 15, 1954—Panhandle filed its second application for a temporary certificate. In this application Panhandle did not even claim that it could provide any increased capacity to its customers this coming winter. Instead, Panhandle merely stated that "if such certificate is granted *in the near future*, it is *believed* the loop lines can be completed in time for service in the winter season 1954-55." (Italics added.)

Panhandle's application for a temporary certificate was not granted "in the near future" and over a month elapsed before the Commission issued its telegraphic order of September 2, 1954. Accordingly, there is no possible basis for even a belief that the loop lines can be completed in time for service this winter. Moreover, Panhandle's own

statements prove that this cannot be done, as hereinafter shown.

In its first application, filed on June 10, 1954, Panhandle stated that, from the time it places firm orders for pipe, a minimum of two months is required for the delivery of sufficient pipe to enable it to commence

construction. Panhandle further stated that if such pipe orders were not placed promptly in June, there would be a further delay in the pipe deliveries.

In its first application, filed on June 10, 1954, Panhandle also stated that 3 months would be required for the construction of the pipeline loops and that such construction must be completed by November 15, 1954. Finally, Panhandle stated:

"If both the steel and construction contracts for the line looping project are not let in the early summer of 1954 so that the work can be completed on or about November 15, 1954, *this work could not be done before the spring of 1955* and the resultant increase in capacity would not be available until the winter of 1955-1956." (Italics added.)

In the light of the foregoing, the Commission's issuance of a temporary certificate on September 2, 1954 would not enable Panhandle to commence, let alone complete, the construction of the pipeline loops for the winter of 1954-1955.

Since the pipeline loops thus cannot be constructed for use during the coming winter, there was no reason or justification for the issuance of a temporary certificate, even assuming an emergency when none exists.

Moreover, Panhandle failed to show the existence of an emergency which clearly and obviously must exist in order to permit the issuance of a temporary certificate under the specific language of the Natural Gas Act. Instead,

Panhandle claimed merely that the Commission should issue a temporary certificate because its customers need additional gas. However, as the Commission knows, this has been a chronic condition in the entire natural gas industry and on Panhandle's system for many years. It obviously does not represent an "emergency" within the meaning of Section 7(c) of the Act. The long standing shortage of gas on Panhandle's system

has not been caused by any "emergency" but has resulted from Panhandle's persistent refusal to expand its facilities to serve the needs of its utility customers while at the same time it attempts to deprive them of gas they desire by selling large volumes of gas directly to industrial consumers and by exporting gas to Canada, which has vast proven and potential gas reserves.

It is equally clear that Panhandle withheld the filing of an application to expand its capacity in an attempt to force the Commission to approve a rate increase which Panhandle might consider to be satisfactory. The rate proceedings began in August, 1951, and were decided by the Commission on April 15, 1954.

As far back as October 29, 1953 representatives of Panhandle appeared before the Michigan Public Service Commission and talked of a proposed expansion program which would be filed with the Federal Power Commission "upon the assurance of just and reasonable treatment to Panhandle, including adequate rates."

In a letter to stockholders dated February 8, 1954, Mr. W. G. Maguire, chairman of the board and president of Panhandle, said that Panhandle has "recently" made application to the Office of Defense Mobilization for rapid tax amortization certificates involving proposed increases in Panhandle's capacity. Mr. Maguire explained that these

applications were filed with the Office of Defense Mobilization in the belief that "just and reasonable rates will eventually prevail." This letter to stockholders was contained in Panhandle's 1953 annual report, which was issued more than three months before Panhandle filed an application to expand its facilities with this Commission.

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Panhandle withheld its filing to expand its facilities until more than a month after the Commission authorized a rate increase in Opinion No. 269. Shortly after filing its long-delayed application, however, Panhandle suddenly found that "in view of the steel situation and weather conditions" it must have a temporary certificate issued almost immediately to meet some newly-discovered but nonexistent emergency.

On June 30, 1954 Panhandle filed an application for another $12,000,000 increase in its rates which application raises doubts as to whether Panhandle will actually proceed with the construction of its proposed new facilities, including those for which it is requesting a temporary certificates, unless the Commission authorizes it to receive the 6.75 per cent return on its regulated business which it is seeking. In its latest rate increase application Panhandle states:

"The successful financing, construction and operation of these large facilities is dependent, in part, upon the achievement of an adequate and fair allowance for return in the instant filing."

Thus the only "emergency" in the situation is the desire and determination of Panhandle to exact a large additional rate increase from the Commission.

IV.

The Commission properly held in its telegraphic order of June 30, 1954, denying Panhandle's first application for a temporary certificate, that such request "does not come within the purview of the authority of this Commission to grant." As noted earlier, nothing occurred to change the facts or the law between the date of this correct ruling by the Commission and its subsequent action in erroneously reversing this determination.

In urging the Commission to reverse this conclusion, Panhandle cited four decisions in its second application for a temporary certificate, none of which supports its contentions.

The first case discussed by Panhandle is *Algonquin Gas Transmission Company* v. *F. P. C.*, 201 F(2d) 334 (CCA-1). The only point made by Panhandle in connection with that case is that the Court did not pass upon the Commission's authority to issue a temporary certificate to an existing pipeline company as distinguished from a new pipeline company. Accepting Panhandle's interpretation of the decision, it is obviously not a precedent for the issuance of a temporary certificate to Panhandle in this case.

The second case cited by Panhandle, (Docket No. G-1302), involved the issuance of a temporary certificate to Michigan Wisconsin Pipe Line Company ("Michigan Wisconsin"). However, the facts in that case were in no way similar to those presented by Panhandle's instant application.

Michigan Wisconsin filed an application for a permanent certificate to install an additional 115,560 horsepower of compression and Michigan Wisconsin requested authority to proceed at its own risk with the construction of two of the compressor stations involving only 15,840 of the additional horsepower. The Commission *denied* this request

by letter of March 14, 1950, even though the initial hearings including the presentation of Michigan Wisconsin's direct case, had been completed. Upon Michigan Wisconsin's request for reconsideration, *the Commission by letter of March 21, 1950, requested Panhandle for its comments. It was only after Panhandle by telegram of March 24, 1950, indicated that it had no basis for any objection that the Commission by letter of March 29, 1950 issued a temporary certificate to Michigan Wisconsin covering the construction of its Stations 2 and 7.* A second temporary certificate was issued to

Michigan Wisconsin on June 28, 1950, but this was not done until nearly two months *after* the hearings were concluded and thirteen days *after* the Commission heard oral argument (9 F.P.C. 152, 154).

The Commission's action in the Michigan Wisconsin case was based upon the evidence which had been presented in the record. Whereas in this case no evidence has been presented and Panhandle's application has not even been set down for hearing. Also, in the Michigan Wisconsin case, the Commission acted only after it had assured itself that, in fact, a real emergency existed, and that there was no objection to the issuance of a temporary certificate.

The third case cited by Panhandle involved the issuance of a temporary certificate to Northern Natural Gas Company in Docket No. G-1618 but in that case there also was no opposition to the issuance of the temporary certificate.

The fourth case cited by Panhandle, (Docket No. G-1705), involved the issuance of a temporary certificate to enable Panhandle to make certain changes in its "C" facilities which the Commission had previously authorized in Docket No. G-876 (7 F.P.C. 700). Here again the facts were not comparable to those involved in Panhandle's instant application. Moreover, there was no opposition

to the issuance of a temporary certificate in that case and all interested parties had a full opportunity to learn all the pertinent facts in the hearings which were held before the issuance of the original certificate in Docket No. G-876.

It is clear from the legislative history of the provisions of Section 7(c) of the Natural Gas Act that Congress did not intend to authorize the Commission to grant a temporary certificate covering the construction of 294.6 miles of large diameter pipe at a cost of $22,885,000.

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As the Commission pointed out in its report to the House Committee on Interstate and Foreign Commerce (Hearings on H. R. 5249, pp. 83-84), the provision for the issuance of temporary certificates "was put in the bill primarily to provide for emergency interconnections of pipelines, which are sometimes necessary to make it possible to maintain adequate service *in cases of extraordinary peak demands, breakdowns, and so forth.*" (Italics added.)

This provision of the bill was subsequently amended "to limit the authority from granting a temporary certificate to emergency situations involving only a comparatively *minor* extension of the facilities of an existing system." (H.R. Rep. No. 1290, 77th Cong., 1st Sess. 5). (Italics added.)

It is plain that Congress contemplated the issuance of a temporary certificate as a special and extraordinary relief, to be confined to real emergencies of the character enumerated. It plainly should not be extended to cover a general expansion program typical of the natural gas industry which periodically finds the desire of the markets for gas running ahead of the installed capacity.

Accordingly, the Commission exceeded its authority under Section 7(c) of the Act when it issued a temporary certificate to Panhandle by its telegraphic order of September 2, 1954.

V.

A cursory examination of Panhandle's application reveals its failure to meet the basic standards of the Natural Gas Act and the Commission's precedents.

There is no showing in Panhandle's application for a certificate which will support a conclusion by the Commission that Panhandle has adequate gas reserves to permit an expansion in its capacity of 100,000 Mcf per day.

Indeed, Panhandle's application is patently deficient because it does not comply with the Commission's Rules and Regulations and makes no showing of the very gas reserves which would be required to support the facilities authorized by the temporary certificate.

In Section XII of its Application for a Certificate of Public Convenience and Necessity Panhandle made it clear beyond doubt that it proposes to receive gas from new sources in the Anadarko Basin to warrant the expansion of its facilities. The Application states:

"In addition to the gas supply available to it from the Hugoton and Panhandle fields of Kansas, Oklahoma and Texas, *Panhandle has obtained new sources of gas in the Anadarko Basin to enable it to meet the increased requirements of its customers arising out of the new facilities.* It is estimated that of such additional supply of gas, *approximately one third of such supply will be obtained from Panhandle's owned gas reserves and the balance from gas purchase contracts.*" (Italics added.)

During the oral argument before the Commission on the certificate application of American Louisiana Pipe Line Company in Docket No. G-2306, the Chairman stated that in issuing a temporary certificate to Panhandle the Commission had determined that no gas required for the certificate would come from new producers. It seems evident,

however, that this is a misapprehension on the part of the Commission as the before-quoted statement indicates. Apparently, therefore, the Commission in granting the temporary certificate relied upon a mistaken assumption as to Panhandle's owned gas reserves which supposedly exist in the Anadarko Basin.

An examination of Panhandle's application discloses that Panhandle only claims to own a total of 14,224 Mmcf of what it identifies as "developed" gas reserves in the Anadarko Basin. Under the Commission's

precedents, Panhandle should have demonstrated that it had firmly committed to the expansion project proven gas reserves of about one trillion cubic feet to support the facilities certificated by the telegraphic order. In this instance, and throughout its gas supply data, Panhandle fails to list and identify *proven* gas reserves as required by the Commission's Rules and Regulations.

Panhandle also claims that it owns oil and gas leases covering an additional 781,023 Mmcf in the Anadarko Basin, but it identifies these as "undeveloped." If Panhandle employs the word "developed" to indicate proven gas reserves, then "undeveloped" means unproven reserves which Panhandle hopes may exist. Certainly such "undeveloped" gas reserves cannot serve as the basis for issuing a temporary certificate, which is supposed to provide a gas supply to meet an emergency situation.

Nowhere in the Panhandle application is there any geological data to support the existence of either "developed" or "undeveloped" gas reserves. Panhandle merely makes the statement that they exist and presents a tabulation which purports to show acres and volumes of reserves in various reservoirs. There is no indication as to when or how the alleged reserve estimates were prepared or whether

they are the work of a competent geologist. The application does not even contain a map of the gas fields and the proven limits of each reservoir such as is required by the Commission's Rules.

Although the Commission's Rules provide that applicant must file a deliverability study showing the daily volumes of natural gas which can and will be obtained each year from each source of supply, Panhandle has failed to present this information to the Commission. Instead, it has

presented various availability schedules which are completely worthless because they are based upon the withdrawal of the total gas supply which Panhandle classifies as "developed" and "undeveloped".

At no place in the Panhandle application is there sufficient fundamental geological information to check any of the reserve estimates or the availability schedules presented by Panhandle either in the Anadarko Basin or in other gas fields. The Commission recognized this on June 30, 1954, when it denied Panhandle a temporary certificate because of, among other things, "uncertainties as to adequacy of gas supply". On the basis of the official, public record and the information before it, no other course of action could have been taken by the Commission.

In renewing its application for a temporary certificate, Panhandle contended, however, that the Commission had reached its conclusion concerning gas supply because it had not yet received a report of a private meeting between Panhandle representatives and members of the Commission Staff on June 25, 1954.

Panhandle did not claim that the Staff concurred in Panhandle's estimates of its reserves, but it contended that these reserves were adequate to warrant the expansion because it was not suggested at the conference that they were inadequate. In other words, Panhandle argued that

the Commission should issue the temporary certificate because the alleged silence of the Staff indicated consent. Obviously at the time the conference was held the Staff had not had an opportunity to study the application and make the detailed and searching inquiry into reserves which is customary in important certificate cases.

The renewed application for a temporary certificate also suggested that at the June 25 conference the Commission Staff requested "additional

information . . . with respect to the new production fields in the Anadarko Basin". This statement is inconsistent with Panhandle's claim that there was no suggestion that its reserves were not adequate, but the application then states that additional information was supplied to the Staff, presumably some time prior to July 30, 1954.

Being unable to obtain any information which would confirm Panhandle's estimates of its gas reserves and deliverability from the Panhandle application, representatives of Michigan Consolidated made a request of the Commission Staff that they be permitted to examine the data which Panhandle said it had supplied the Staff subsequent to the June 25 meeting.

The representatives of Michigan Consolidated were informed that this material could not be made available to them or to anyone else because Panhandle had submitted the data with the understanding that it be kept *confidential.*

The facts, therefore, are that there is nothing in the Panhandle application or the public record which would support a finding that Panhandle has adequate gas reserves to meet the requirements of the facilities authorized by a temporary certificate. If the finding is based upon data contained in the "confidential" material submitted by Panhandle, then apparently Panhandle itself is fearful

that this material will not stand the light of public scrutiny, investigation and evaluation.

In connection with the foregoing it should be noted that there have not been hearings on the gas reserves of Panhandle since

its last major certificate case nearly five years ago. In that case the Commission found that as of January 1, 1950, Panhandle's recoverable reserves totalled 6.5 trillion cubic feet and that Trunkline had recoverable reserves as of October 27, 1951 of 1.7 trillion cubic feet or a total of 8.2 trillion cubic feet (9 F.P.C. 731). Panhandle has been and is now selling one-third of a trillion cubic feet of gas per year so that these reserves have been substantially reduced.

In its instant applications Panhandle claims a total "gas supply" of 10.6 trillion cubic feet. Panhandle therefore must be relying upon substantial additional gas reserves which have never been presented in evidence in any hearing and which the interested parties have had no opportunity to examine. As above stated, there is nothing in the application filed by Panhandle which would furnish any geological support of the large increased reserves which are essential to authorization of a large expansion program.

The Commission has always, and properly so, required a full showing of reasonable adequacy of gas reserves to support an expansion program. This policy is necessary to protect the consumer, the investor and the public alike. It is difficult to believe that the Commission will now abandone this wise and time-honored regulatory requirement.

VI.

One of the grounds upon which the Commission by its telegraphic order of June 30, 1954 properly denied Panhandle's first application for a temporary certificate was the uncertainties as to the "specific markets to which gas may be delivered." These uncertainties were not removed by Panhandle's second application for a temporary certificate and the Commission accordingly erred in granting such temporary certificate by its telegraphic order of September 2, 1954.

In its second application Panhandle listed increased deliveries to certain customers for the winter of 1954-55 but there is no assurance that such deliveries can be maintained in future years. Accordingly, even if these selected customers were to receive the increased deliveries from Panhandle they could not take on additional firm requirements.

Panhandle's application shows that all of the capacity to be provided by the pipeline loops, which are the subject of the temporary certificate, will be ultimately used to serve East Ohio Gas Company, Ohio Fuel Gas Company and Michigan Gas Storage Company. The customers which were listed in Panhandle's second application for a temporary certificate will receive a permanent increase in their deliveries only if Panhandle's Waverly storage project—which is still in the experimental stage—proves successful. Panhandle admittedly has doubts with respect to this project which involves the injection of storage gas into a salt dome "filled with water." In this connection Panhandle's application states:

"It is proposed to make further tests of the storage field by injecting additional volumes of gas into the field. If such tests establish the workability of the field as a storage field, Panhandle plans to begin the storage of gas."

While Panhandle undertook to show what it might do with its increased capacity during the coming winter season, Panhandle failed to indicate the use it would make of such capacity during the summer months. In view of Panhandle's announced policies and past practices there can be

no doubt that Panhandle will attempt to use such capacity to raid the markets of its utility customers by making direct industrial sales and to export gas to gas-rich Canada at rates over which this Commission has no jurisdiction.

VII.

After its first application for a temporary certificate was properly rejected by the Commission, Panhandle in its second application belatedly asserted that it had on June 29, 1954 issued and sold $35,000,000 of debentures in reliance on obtaining a temporary certificate for its expansion program and implied that this new money was necessary for the expansion program. The actual facts are far different.

In fact, as shown by Panhandle's financing prospectus filed with the Securities Exchange Commission, it had a net current asset deficit position of approximately $4,000,000. This contrasts strongly with the net current asset *credit* position of $10,000,000 which Panhandle vigorously asserted in its rate case to provide working capital for an enterprise of its size.

This financial data (as of December 31, 1953), likewise shows that Panhandle had cash and Government obligations of approximately $18,700,000. These funds were totally inadequate to meet the cash refund of at least $32,000,000 ordered by the Commission in Panhandle's recent rate proceedings, even if they were available for this purpose, although obviously they were not.

(18243)

The financial data also shows that over the past 9 years the plant account of Panhandle has averaged an annual increase of more than $13,000,000, with the smallest increase in any one year being approximately $6,000,000.

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Panhandle, therefore, would normally spend a large amount in 1954 for plant improvements if it merely followed the pattern of growth established over the last decade and without regard to any special expansion program. Normal construction is thus a sharp cash drain, as Panhandle's debt requirements approximate its depreciation accrual and there is relatively little cash generated from operations.

With the *deficit* in its current net asset position, as contrasted with its large working capital requirements; with its limited cash and Government obligations on hand; with the necessary cash outlay required for normal expansion and with the imminent refund of at least $32,000,000 in cash to be made to its customers, it is plain beyond question that Panhandle had to obtain large new cash funds early in 1954. This necessitated either bank borrowing or the sale of securities and it is no mere coincidence that the new debentures which Panhandle elected to sell were in the amount of $35,000,000, which so closely approximates the cash refund of at least $32,000,000 to be made by Panhandle.

The facts disclose, therefore, that the debentures were not issued to finance the large new construction program for which a temporary certificate was sought but, on the contrary, were issued to provide cash urgently needed by Panhandle for refund purposes and for normal capital expenditures.

This is further shown by the fact that it was not until July 9, 1954—some 10 days after the sale of the debentures—that Panhandle made what it characterized as a

"partial refund" of some $14,000,000 to its utility customers. It is impossible to physically trace cash in the corporate treasury, but in view of the circumstances there can be no doubt as to the source of these funds.

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VIII.

In issuing its telegraphic order of September 2, 1954, granting a temporary certificate to Panhandle, the Commission exceeded its authority under the Natural Gas Act since, as hereinafter shown, Panhandle is not "willing" to "conform to the provisions of the Act and the requirements, rules and regulations of the Commission thereunder." Panhandle therefore is not a "qualified applicant" for a certificate of public convenience and necessity under Section 7 (c) and Section 7 (e) of the Act.

As previously stated, Panhandle has long attempted to sell gas directly to industrial consumers located in the distribution areas of its utility customers at rates outside the jurisdiction of this Commission instead of selling such gas to its utility customers for resale to such industrial consumers at regulated prices. This policy of Panhandle is directly contrary to the intent and purpose of the Natural Gas Act.

In carrying out this policy Panhandle has violated the express provisions of numerous certificates of public convenience and necessity which were issued by the Commission and accepted by Panhandle. These certificates prohibit Panhandle from taking on any new customer, including any new direct customers, without the prior approval of the Commission. The last major certificate issued to Panhandle also required Panhandle to sell its excess gas to its utility customers in accordance with the provisions of the interruptible rate schedules in its tariff.

Although Panhandle accepted these certificates it has openly and flagrantly violated the requirements of such

certificates by taking on new direct industrial customers without the Commission's approval and by refusing to sell any of its excess gas to its utility customers under its interruptible rate schedules

In Opinion No. 274 and the accompanying order issued July 28, 1954, in Docket No. G-2035, et al., the Commission, after extended hearings, and oral argument, affirmatively found that Panhandle in selling gas directly to the Mueller Brass Company without obtaining the approval of the Commission

"*has continuously violated the Natural Gas Act since November 15, 1951.*" (Italics added.)

As set forth in the Commission's order issued November 5, 1953, in Docket No. G-2301, Panhandle "refused" to sell its excess gas to its utility customers as required by its interruptible rate schedules and "ignored" the provisions of such schedules.

Also in Opinion No. 274 and the accompanying order the Commission found that "Panhandle's maintenance of priorities of service for its direct sale customers, different from those set forth in its filed tariff and rate schedules, *is unjust, unreasonable, unduly discriminatory, preferential and unlawful.*" (Italics added.)

Panhandle has thus shown by its persistent and open defiance of the Commission that it is not "willing" to conform to the provisions of the Act and the requirements, rules and regulations of the Commission thereunder, unless such conformance suits Panhandle's desires and objectives.

Panhandle therefore is not a "qualified applicant" and the Commission erred in issuing a temporary certificate by its telegraphic order of September 2, 1954.

IX.

The Commission's action in granting a temporary certificate to Panhandle by its telegraphic order of September

2, 1954 was thus unauthorized by Section 7(c) of the Act and contrary to the intent of Congress. Such action constituted a denial of due process of law and an invasion of the statutory and Constitutional rights of interested parties including Michigan Consolidated.

WHEREFORE, Michigan Consolidated respectfully requests recession of the Commission's telegraphic order of September 2, 1954, granting a temporary certificate and reinstatement of the telegraphic order of June 30, 1954, denying a temporary certificate; or if this relief is not granted, a

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rehearing and stay of the Commission's telegraphic order of September 2, 1954 issuing a temporary certificate to Panhandle.

Respectfully submitted,

MICHIGAN CONSOLIDATED GAS COMPANY

/s/ HUGH C. DALY

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UNITED STATES OF AMERICA
FEDERAL POWER COMMISSION

Before Commissioners: Jerome K. Kuykendall, Chairman; Claude L. Draper, Seaborn L. Digby and Frederick Stueck.

In the Matters of — Oct. 29, 1954

PANHANDLE EASTERN PIPE LINE COMPANY	Docket Nos. G-1705, G-1937, G-2433, and G-2475
INDIANA GAS & WATER COMPANY, INC.	Docket No. G-1813
INDIANA GAS & WATER COMPANY, INC. v. PANHANDLE EASTERN PIPE LINE COMPANY	Docket No. G-2023
MISSOURI PUBLIC SERVICE COMPANY	Docket No. G-2057
CITY OF MONTGOMERY, MISSOURI	Docket No. G-2932
TOWN GAS COMPANY OF ILLINOIS	Docket No. G-3159

Order Permitting Intervention

Petitions for leave to intervene or late-filed notices of intervention have been filed as follows:

Docket No. G-1705

Petitioner	Date Filed
Michigan Consolidated Gas Company	July 2, 1951

Docket No. G-2433

City of Detroit, Michigan	June 1, 1954
Missouri Central Natural Gas Company	June 14, 1954
County of Wayne, Michigan	June 17, 1954
Central West Utility Company	June 17, 1954
Indiana Gas & Water Company, Inc.	June 21, 1954
Michigan Consolidated Gas Company	June 21, 1954
Michigan Gas Storage Company	June 21, 1954
Missouri Public Service Company	June 21, 1954
National Coal Association, United Mine Workers of America, Fuels Research Council, Inc., and Anthracite Institute	June 21, 1954

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Petitioner	Date Filed
The Ohio Fuel Gas Company	June 21, 1954
Texas Gas Transmission Corporation	June 21, 1954
The Gas Service Company	June 21, 1954
The East Ohio Gas Company	June 23, 1954
Michigan Public Service Commission	June 25, 1954
Public Service Commission of Indiana	June 28, 1954
City of Montgomery, Missouri	July 6, 1954
City of Slater, Missouri	July 7, 1954
Battle Creek Gas Company	July 12, 1954
Michigan Gas Utilities Company	July 12, 1954
Citizens Gas Fuel Company	August 3, 1954
Village of Westville, Vermillion County, Illinois	September 22, 1954
Docket No. G-2475	
County of Wayne, Michigan	July 19, 1954
Union Gas Company of Canada, Limited	July 28, 1954
City of Detroit, Michigan	August 11, 1954
Michigan Consolidated Gas Company	August 30, 1954
National Coal Association, United Mine Workers of America, Fuels Research Council, Inc., and Anthracite Institute	August 30, 1954
Public Service Commission of the State of Missouri	August 31, 1954

Answers and objections to the intervention of Missouri Public Service Company, Texas Gas Transmission Corporation, The Gas Service Company, and Michigan Consolidated Gas Company in Docket No. G-2433 were filed by Panhandle Eastern Pipe Line Company on June 30, 1954.

The Commission *finds*:

(1) Although a number of the petitions were not filed within the time required by Section 1.8 of the Commission's Rules of Practice and Procedure, good cause exists to permit the late filing.

(2) The participation of the above-named petitioners in the respective proceedings enumerated above may be in the public interest.

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The Commission *orders*:

The above-named petitioners be and they are hereby permitted to become intervenors in the respective proceedings enumerated above, subject to the rules and regulations of the Commission: *Provided, however,* That the participation of such intervenors shall be limited to matters affecting asserted rights and interests specifically set forth in such petitions for leave to intervene; and *Provided, further,* That the admission of such intervenors shall not be construed as recognition by the Commission that they might be aggrieved because of any order or orders of the Commission entered in these proceedings.

By the Commission.

LEON M. FUQUAY,
Secretary.

Adopted: October 29, 1954
Issued: November 2, 1954

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UNITED STATES OF AMERICA
FEDERAL POWER COMMISSION

Before Commissioners: Jerome K. Kuykendall, Chairman; Claude L. Draper, Seaborn L. Digby and Frederick Stueck.

Oct. 29, 1954

In the Matters of

PANHANDLE EASTERN PIPE LINE COMPANY	Docket Nos. G-1705, G-1937, G-2433, and G-2475
INDIANA GAS & WATER COMPANY, INC.	Docket No. G-1813
INDIANA GAS & WATER COMPANY, INC. v. PANHANDLE EASTERN PIPE LINE COMPANY	Docket No. G-2023
MISSOURI PUBLIC SERVICE COMPANY	Docket No. G-2057
CITY OF MONTGOMERY, MISSOURI	Docket No. G-2932
TOWN GAS COMPANY OF ILLINOIS	Docket No. G-3159

Order Consolidating Proceedings, Fixing Date for Hearing and Specifying Procedure

Panhandle Eastern Pipe Line Company (Panhandle) on May 18, 1954 filed its application at Docket No. G-2433 for a certificate of public convenience and necessity authorizing the construction and operation of facilities proposed to increase its peak day sales deliverability by 455,000 Mcf per day. Temporary authorization for the construction only of facilities permitting a daily deliverability increase of 100,000 Mcf was granted on September 2, 1954.

Panhandle, in Docket No. G-1705, sought authorization for the construction and operation of facilities which would raise the maximum day capacity of Panhandle's main line from 550,000 Mcf to 600,000 Mcf. Although temporary authorization was granted for this project on August 14,

1951, no hearing thereon has as yet been held. We will consolidate it with the other proceedings at hand so that hearings on this application may merge with those on the Docket No. G-2433 project.

Included in Panhandle's application at Docket No. G-2433 is a proposal for the institution of storage operations in storage fields located near Waverly, Illinois. Such project contemplates the injection of gas in the storage fields during off-peak periods and the delivery thereof on peak days. Panhandle at Docket No. G-2475, has applied for authorization pursuant to Section 3 of the Natural Gas Act for the export of up to 15,500,000 Mcf of gas per year to Union Gas Company of Canada, Ltd. on an interruptible basis. In view of the effect that delivery of this considerable volume of gas may have on Panhandle's reserves as well as the question of the availability of gas for such

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purposes in the light of the Waverly Storage Project, we find that Docket No. G-2475 should be consolidated with these proceedings for the purposes of hearing.

Among the matters to be considered in these consolidated proceedings is the distribution among Panhandle's present and prospective customers of the gas available from Panhandle's system. Collateral to this matter is the problem of the capacity of lateral lines extending from the main pipe line. Included in the application at Docket No. G-2433 is a request for authorization to construct and operate facilities which would increase the capacity of certain of its laterals. Absent, however, is a request for authorization to construct and operate additional facilities on the Louisburg lateral which in the past has been found to be under-sized for the delivery of the gas requirements of Panhandle customers served therefrom. In the consolidated proceedings, Docket Nos. G-1813, G-1937, and G-2023,

we considered Panhandle's lateral policy in relation to the Crawfordsville and Lebanon laterals serving Indiana Gas & Water Company. We found therein in our order issued April 22, 1953, that unlawful discrimination existed by reason of Panhandle's failure to provide adequate lateral facilities in these instances. By order issued June 19, 1953, we granted rehearing on these dockets. These matters are presently pending. Our general consideration of the lateral policy of Panhandle, which of necessity is involved in Panhandle's application at Docket No. G-2433, makes it appropriate to consolidate such docket with the rehearing of Docket Nos. G-1813, G-1937, and G-2023.

Docket No. G-2057 is an application pursuant to Section 7(a) of the Natural Gas Act for an order directing Panhandle to make connection and deliver gas to Missouri Public Service Company for distribution in a number of Missouri communities. This docket was originally consolidated for hearing in the proceedings *In the Matter of Panhandle Eastern Pipe Line Company, et al.*, Docket No. G-1116, *et al.* By order issued September 20, 1954, we granted Missouri Public Service Company's motion for Docket No. G-2057 to be removed from the Docket No. G-1116, *et al.* proceedings and for stay or deferment of the proceedings in Docket No. G-2057 pending hearing in Docket No. G-2433.

Two other applications pursuant to Section 7(a) of the Act have been filed seeking service from Panhandle. The first is Docket No. G-2932 filed by the City of Montgomery, Missouri on September 21, 1954, and the second is Docket No. G-3159 filed by Town Gas Company of Illinois on September 27, 1954. These dockets together with Docket No. G-2057 are consolidated so that they may be considered in view of the application at Docket No. G-2433.

The Commission *finds*:

(1) Good cause exists, and it is necessary and appropriate to consolidate for purposes of hearing the proceedings in Docket Nos. G-1705, G-1937, G-2433, G-2475, G-1813, G-2023, G-2057, G-2932 and G-3159.

(2) It is appropriate in the public interest in carrying out the provisions of the Natural Gas Act, and good cause exists, that the dockets consolidated herein should be set down for public hearing as hereinafter provided and ordered.

The Commission *orders*:

(A) The proceedings in Docket Nos. G-1705, G-1937, G-2433, G-2475, G-1813, G-2023, G-2057, G-2932, and G-3159, be and the same are hereby consolidated for the purpose of hearing.

(B) Pursuant to the authority contained in and subject to the jurisdiction conferred upon the Federal Power Commission by Sections 5, 7, and 15 of the Natural Gas Act, and the Commission's Rules of Practice and Procedure, a hearing be held on November 15, 1954, at 10:00 a.m. (EST) in the Hearing Room of the Federal Power Commission concerning the matters involved and the issues presented by the applications.

(C) The following hearing procedure is prescribed: (i) Panhandle shall first present and complete its direct case. Immediately thereafter, parties to the proceeding, including Staff, may proceed with such cross examination as they are then prepared to conduct. (ii) Each party having a burden of proof in these consolidated proceedings shall present its direct case and shall be cross examined to the extent that parties to the proceedings including Staff are

then prepared to conduct. (iii) Upon completion of presentation of testimony and cross examination thereon as provided in paragraphs (B) and (C) above, the hearing shall be recessed by the Presiding Examiner upon request of any party to the proceedings, including Staff, subject to further order of the Commission.

(E) Interested State commissions may participate as provided by Sections 1.8 and 1.37(f) of the Commission's Rules of Practice and Procedure [18 CFR 1.8 and 1.37(f)].

By the Commission.

LEON M. FUQUAY,
Secretary.

Adopted: October 29, 1954
Issued: November 2, 1954

18302

UNITED STATES OF AMERICA
BEFORE THE FEDERAL POWER COMMISSION

Docket No. G-2433

In the Matter of
PANHANDLE EASTERN PIPE LINE COMPANY

Application for Temporary Authorization to Operate Facilities

Comes now Panhandle Eastern Pipe Line Company ("Panhandle") and files this application for a temporary certificate of public convenience and necessity authorizing the operation of certain facilities as hereinafter described. In support hereof, Panhandle respectfully shows that:

I.

On July 30, 1954, Panhandle filed its application herein seeking authorization to construct and operate approxi-

mately 294.6 miles of additional main loop pipe line. That application is incorporated herein by reference and made a part hereof.

On September 2, 1954, the Commission issued a temporary certificate authorizing the construction of the facilities described above. At the time Panhandle's application was filed, the precise volumes needed by Panhandle's resale customers for the coming winter season were not yet known. Accordingly, the Commission in its telegraphic order granting temporary authorization to construct the facilities, reserved

pending further consideration the granting of authorization to operate the subject facilities.

II.

Immediately following the issuance of the temporary construction permit, Panhandle canvassed each of its General (G) and Small General (SG) Rate Schedule Customers (except as otherwise noted[1]), the only classes of customers entirely dependent upon Panhandle for gas. It was the needs of these customers which created the emergency requiring immediate installation of the new facilities. Accordingly, each of such customers was asked to nominate its requirements for the 1954-55 winter heating season. Thirty-four of such G and SG customers entered into new service agreements with Panhandle. The remaining customers of the same classes informed Panhandle that they

[1] Additional gas was not offered to Central West Utility Company or Gas Service Company because of capacity limitations on the Louisburg lateral, of which the Commission is fully aware. In addition, Panhandle was unable to offer Missouri Power & Light Company, another customer on the Louisburg lateral, additional gas at its Excelsior Springs delivery point, for the same reason. Gas was not offered to Panhandle's Limited Service Customers (all of whom have other sources of supply), or to Michigan Gas Storage Company.

did not desire at this time to increase their contract demands.[2]

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III.

On November 3, 1954, Panhandle filed with the Commission the new service agreements entered into with its 34 G and SG customers requiring additional gas during the coming winter season. The new service agreements canceling and superseding prior agreements, were intended to be made effective on December 15, 1954, contemporaneously with the completion of Panhandle's newly-authorized loop line construction. Except for the contract demands, no change in existing service agreements was made in the new agreements.

The following tabulation shows the companies requiring additional volumes during the coming winter, together with their present winter contract demands and their new winter contract demands:

Service Agreements Dated September 15, 1954	Present Winter Contract Demand	Increase in Winter Contract Demand	New Winter Contract Demand
Battle Creek Gas Company Battle Creek, Michigan	15,000	2,000	17,000
Central Illinois Electric & Gas Company Lincoln, Illinois	6,050	550	6,600
Central Illinois Light Company Peoria, Illinois	99,900	10,100	110,000
Central Illinois Public Service Company Springfield, Illinois	37,800	5,200	43,000
Central Indiana Gas Company Muncie, Indiana	85,000	15,000	100,000

[2] G and SG customers signifying that they did not require, for the coming winter season, additional volumes of gas were American Gas Company, Louisburg Gas Company, City of Roodhouse, Illinois, City of Whitehall, Illinois, Miami Pipe Line Company, Bowling Green Gas Company, and Dayton Power and Light Company.

Service Agreements Dated September 15, 1954	Present Winter Contract Demand	Increase in Winter Contract Demand	New Winter Contract Demand
Central States Natural Gas Company, Inc. Paulding, Ohio	1,500	490	1,990
18305			
Citizens Gas Company Tuscola, Illinois	6,300	2,700	9,000
Citizens Gas Company of Hannibal Hannibal, Missouri	10,000	1,000	11,000
Citizens Gas & Coke Utility (City of Indianapolis) Indianapolis, Indiana	30,000	10,000	40,000
Citizen Gas Fuel Company Adrian, Michigan	4,300	1,500	5,800
Fulton, City of Fulton, Missouri	4,800	1,700	6,500
Greenfield Gas Company Greenfield, Indiana	3,775	725	4,500
Illinois Power Company Decatur, Illinois	67,000	13,000	80,000
Indiana Gas Distribution Corporation Danville, Indiana	4,850	2,650	7,500
Indiana Gas and Water Company, Inc. Indianapolis, Indiana	45,000	5,000	50,000
Kokomo Gas and Fuel Company Kokomo, Indiana	17,000	5,000	22,000
Lapel, Town of Lapel, Indiana	600	400	1,000
Michigan Gas Utilities Company Coldwater, Michigan	11,000	2,000	13,000
Missouri Edison Company Louisiana, Missouri	3,500	100	3,600
Missouri Power & Light Company Jefferson City, Missouri	39,000	2,000	41,000
18306			
Missouri Utilities Company Columbia, Missouri	15,000	2,500	17,500
Missouri Western Gas Company Butler, Missouri	2,785	315	3,100
Montezuma, Town of Montezuma, Indiana	600	900	1,500

Service Agreements Dated September 15, 1954	Present Winter Contract Demand	Increase in Winter Contract Demand	New Winter Contract Demand
Morton Municipal Gas Company Morton, Illinois	1,975	1,025	3,000
Northern Indiana Public Service Company Fort Wayne, Indiana	45,000	2,000	47,000
Ohio Gas Company Bryan, Ohio	12,200	1,600	13,800
Ohio Valley Gas Corporation Winchester, Indiana	3,200	1,800	5,000
Pendleton Natural Gas Company Pendleton, Indiana	1,600	375	1,975
Pittsboro, Town of Pittsboro, Indiana	350	50	400
Pittsfield, The City of Pittsfield, Illinois	1,975	925	2,900
Richmond Gas Corporation Richmond, Indiana	8,200	800	9,000
Roachdale, Town of Roachdale, Indiana	500	100	600
Southeastern Michigan Gas Company Port Huron, Michigan	16,200	3,800	20,000
The Toledo Edison Company Defiance, Ohio	3,000	1,000	4,000
Total Increase in Winter Contract Demand			98,305

IV.

Immediately upon receiving temporary authority to construct the loop line facilities, Panhandle commenced such construction in order that the increased capacity would be available at the earliest possible moment. Panhandle has expedited this construction work in every way possible so as to meet the emergency presented. Under the present schedule those facilities, costing approximately $23,000,000, will be completed on or about December 15, 1954. As stated above, the new service agreements were filed so as to become effective also on December 15.

V.

Although Panhandle has not urged its customers to do so, their need for additional volumes of gas is so great that, according to Panhandle's information, many if not most of such customers have made their plans for the coming winter in reliance upon the availability of the volumes involved herein. In many cases, space heating customers have been attached in anticipation of Panhandle's operation of the newly-constructed facilities.

VI.

The procedure here requested is almost identical with that adopted by the Commission in *Northern Natural Gas Company*, Docket No. G-2063. In that proceeding, the Commission granted, on May 1, 1953, a certificate authorizing Northern Natural to construct but not to operate new facilities

capable of delivering an additional 200,000 Mcf per day. Then, on December 24, 1953, the Commission authorized Northern Natural to operate those facilities pending final determination of the certificate proceeding. A permanent certificate was granted by Opinion 268, issued March 11, 1954. The procedure adopted by the Commission in that recent case, which is equally appropriate here, was of great benefit to Northern Natural's utility customers during the winter period.

VII.

WHEREFORE, in view of the foregoing, Panhandle respectfully requests that the Commission issue a temporary certificate of public convenience and necessity authorizing the operation, commencing December 15, 1954, of the loop

pipe line for which authority has already been given for construction.

Respectfully submitted,

PANHANDLE EASTERN PIPE LINE COMPANY

By /s/ WILLIAM E. MILLER
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WESTERN UNION TELEGRAM

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FEDERAL POWER COMMISSION
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MICHIGAN CONSOLIDATED GAS COMPANY RESPECTFULLY OBJECTS TO THE APPLICATION OF PANHANDLE EASTERN PIPE LINE COMPANY IN DOCKET NO. G-2433 FOR A TEMPORARY CERTIFICATE TO OPERATE ADDITIONAL MAINLINE LOOPS AND REQUESTS THAT THE COMMISSION REJECT THE NEW SERVICE AGREEMENTS WHICH PANHANDLE HAS EXECUTED WITH CERTAIN OF ITS CUSTOMERS. AS MICHIGAN CONSOLIDATED WILL SHOW IN THE WRITTEN RESPONSE IT IS NOW PREPARING AND WILL PROMPTLY FILE, IT IS ESSENTIAL IN THE PUBLIC INTEREST THAT A HEARING BE HELD BEFORE ANY DISPOSITION IS MADE OF THIS ADDITIONAL CAPACITY WHICH PANHANDLE PROPOSES TO ALLOCATE TO CERTAIN OF ITS CUSTOMERS WITHOUT ANY SHOWING OF ITS MARKET REQUIREMENTS.

PANHANDLE'S PROPOSAL CONTRAVENES THE MANDATE OF THE THIRD CIRCUIT COURT OF APPEALS PURSUANT TO WHICH THE ALLOCATION PROCEEDINGS IN DOCKET NO. G-1116 WERE RE-

OPENED AND SUCH PROPOSAL ADVERSELY AFFECTS THE RIGHTS OF THE PARTIES IN THAT PROCEEDING IN WHICH PANHANDLE CONTENDS THAT THE CONTRACT DEMANDS OF ITS CUSTOMERS HERETOFORE APPROVED BY THE COMMISSION EXCEED ITS PRESENT CAPACITY BY SOME FORTY MILLION CUBIC FEET PER DAY. THE ADDITIONAL CAPACITY PROVIDED BY THE MAINLINE LOOPS IS THUS REQUIRED TO MEET PANHANDLE'S PRESENTLY EFFECTIVE CONTRACT DEMANDS AND CANNOT BE USED TO ATTACH INCREASED FIRM LOADS AS NOW PROPOSED BY PANHANDLE.

THE PROPOSAL IN PANHANDLE'S APPLICATION FOR A TEMPORARY CERTIFICATE IS DIRECTLY CONTRARY TO ITS APPLICATION IN DOCKET NO. G-2433. THE LATTER SHOWS THAT PANHANDLE HAS CONTRACTED TO SELL ALL OF THIS ADDITIONAL MAINLINE CAPACITY TO EAST OHIO GAS COMPANY, OHIO FUEL GAS COMPANY, AND MICHIGAN GAS STORAGE COMPANY AND THAT ANY INCREASED DELIVERIES TO ITS GENERAL SERVICE CUSTOMERS ARE DEPENDENT UPON THE WAVERLY STORAGE PROJECT WHICH IS ADMITTEDLY EXPERIMENTAL AND WHICH HAS NOT BEEN REVIEWED OR CERTIFICATED BY THE COMMISSION. THE MAINLINE LOOPS THEREFORE DO NOT PROVIDE ANY ADDITIONAL CAPACITY FOR THE GENERAL SERVICE CUSTOMERS.

ACCORDINGLY PANHANDLE IS SEEKING TO TAKE ON ADDITIONAL FIRM LOADS, INCLUDING SPACE HEATING, WITHOUT ANY ASSURANCE THAT IT CAN SERVE SUCH ADDITIONAL LOADS EITHER NOW OR IN THE FUTURE.

PANHANDLE'S APPLICATION IN DOCKET NO. G-2433 HAS BEEN ON FILE SINCE MAY 18, 1954, OR NEARLY SEVEN MONTHS, AND HEARINGS THEREON HAVE BEEN TWICE POSTPONED AT PANHANDLE'S REQUEST. PANHANDLE IS SEEKING TO INSTALL AND DISPOSE OF ADDITIONAL CAPACITY WITHOUT AFFORDING THE COMMISSION AND ALL INTERESTED PARTIES AN OPPORTUNITY TO ASCERTAIN THE TRUE FACTS IN A PUBLIC HEARING AS REQUIRED BY THE ACT IN THE PUBLIC INTEREST.

PANHANDLE CITES ONLY ONE CASE THAT OF NORTHERN NATURAL GAS COMPANY AS A PRECEDENT FOR THE PROCEDURE IT IS HERE REQUESTING. HOWEVER, THAT CASE DID NOT INVOLVE ANY TEMPORARY CERTIFICATE AND THE COMMISSION REFUSED TO AUTHORIZE THE OPERATION OF THE FACILITIES UNTIL AFTER ALL PARTIES HAD BEEN HEARD WITH RESPECT TO THE DISPOSITION TO BE MADE OF THE GAS. THE SAME PROCEDURE SHOULD BE FOLLOWED HERE. WE ARE WIRING THE TEXT OF THIS TELEGRAM TO PANHANDLE

MICHIGAN CONSOLIDATED GAS CO BY: CHARLES V SHANNON ITS ATTORNEY.

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UNITED STATES OF AMERICA
BEFORE THE FEDERAL POWER COMMISSION

Docket No. G-2433

In the Matter of

PANHANDLE EASTERN PIPE LINE COMPANY

Answer and Objection to Application of Panhandle Eastern Pipe Line Company for Temporary Authorization to Operate Facilities

Michigan Consolidated Gas Company ("Michigan Consolidated") objects to the attempt by Panhandle Eastern Pipe Line Company ("Panhandle") to obtain authorization to operate facilities in such manner and for such purposes as will perpetuate Panhandle's claimed inability to meet its firm obligations to serve its customers.

As will be shown hereinafter, Panhandle is requesting that the Commission certificate the operation of facilities upon the unwarranted assumption that Panhandle will be permitted to create a gas famine in Detroit and other important communities in Michigan by abandoning 30 per cent of its deliveries to Michigan Consolidated and that Panhandle will be permitted to completely abandon service to Gas Service Company and Texas Gas Transmission Company.

Upon the basis of these abandonments, Panhandle asks that the Commission authorize it to increase the amount of its firm obligations to certain customers by approximately the full amount of its increased capacity, although there is no assurance that Panhandle will

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be able to supply the increased obligations to these customers either now or in the future.

Indeed, the customers who will receive the additional gas service now proposed by Panhandle can obtain this volume of gas in the future only if Panhandle succeeds in its admitted experiments to develop a gas storage field in a dome filled with salt water near Waverly, Illinois. If the experiment fails, Panhandle will be unable to serve its proposed contract requirements to these customers or be unable to meet its obligations to others.

Without presenting a particle of evidence to the Commission as to the possible development of this storage area, Panhandle is attempting to create a situation which it hopes would force the Commission to certificate the storage operation.

In view of these facts and others it is obvious that it is not in the public interest to permit Panhandle to operate its "emergency" main line loop facilities as it proposes and it is respectfully requested that the Commission hold a hearing to determine the fair and proper disposition of Panhandle's additional gas supply as contemplated in its temporary certificate authorizing construction. In support of this request Michigan Consolidated shows:

I

Michigan Consolidated is a public utility engaged in the purchase, transportation and distribution of natural gas in various cities and communities in the State of Michigan, including the metropolitan areas of Detroit, Ann Arbor, Grand Rapids and Muskegon.

Michigan Consolidated purchases from Panhandle 125,000 Mcf of natural gas a day at Detroit and 2,000 Mcf a day at Ann Arbor. By reason of these purchases Michigan Consolidated is one of Panhandle's largest customers.

II

In Paragraph I of its application for authority to operate its additional loop line facilities Panhandle has seriously misstated the facts concerning the temporary authorization for construction and the procedure to be followed prior to the operation of the facilities. Its original application was filed on June 10, 1954, not on July 30, 1954, as stated by Panhandle. On June 30, 1954, this application was denied by the Commission "because the request does not come within the purview of the authority of this Commission to grant." Panhandle filed another application for a temporary certificate on July 30, 1954, and on September 2, 1954, the Commission granted Panhandle temporary authority to increase its sales capacity by 100,000 Mcf per day "as more fully described in its application for temporary authorization filed *June 10, 1954.*" The Commission's telegraphic order to Panhandle then stated:

> "AUTHORIZATION TO OPERATE THE SUBJECT FACILITIES IS RESERVED PENDING *A DETERMINATION BY THE COMMISSION* AS TO THE DISPOSITION OF SUCH INCREASED CAPACITY REQUIRED BY THE PUBLIC INTEREST." (Italics added)

Panhandle in its misleading recital of its version of the

facts has ignored this clear statement that the Commission is to determine the disposition of the increased capacity. Instead, Panhandle has assumed that it can make an arbitrary allocation of its increased capacity and force this allocation upon the Commission by delaying its request for authority to operate the additional loop lines until 13 days before the facilities are scheduled for completion. Nowhere does Panhandle even attempt to explain the reason for the long delay in seeking authority to operate its new facilities.

III

In its application for authority to operate its additional loop lines Panhandle makes its first public disclosure that it has executed new service agreements with 34 of its general and small general service customers which increase their total winter contract demands by 98,305 Mcf per day. Although Panhandle states that these new service agreements were filed with the Commission on November 3, 1954, they were not served upon Michigan Consolidated in accordance with Section 154.16 of the Commission's Rules and Regulations.

Panhandle thus proposes to sell virtually all of its increased capacity to the 34 customers with whom it has entered into revised service agreements, but Panhandle very carefully fails to disclose the method by which it arrived at the increased volumes for each customer. Panhandle states that each customer was asked "to nominate its requirements for the 1954-55 winter heating season", but Panhandle

attempts to finesse the question of whether the new service agreements meet the customers' requirements. Instead, Panhandle merely states: "Thirty-four of such G and SG customers entered into new service agreements with Panhandle."

It is apparent that at least some of the new service agreements do not contain the volumes which Panhandle claimed were the customers' requirements in its certificate application of July 30. In that application Panhandle listed what it designated as some of its general service customers "stated requirements for the 1954-55 winter season." Panhandle's application of July 30 said that Ohio Gas Company desired 2,000 Mcf, but it will receive only 1,600 under the new service agreement. On the other

hand, Illinois Power Company, listed by Panhandle on July 30 for 10,000 Mcf, is to receive 13,000 Mcf and Southeastern Michigan Gas Company, said by Panhandle to require 2,000 Mcf, will receive 3,800 Mcf under its new service agreement.

Although it is impossible at the present time for the Commission to determine the actual requirements of the 34 customers, it is apparent from the record in other proceedings now pending before the Commission *that Panhandle itself contends it does not have the gas required to serve these additional contract demands.*

In March, 1952, the Commission in Docket No. G-1317 *et al* made effective on the Panhandle system maximum contract volumes which totalled 1,007,683 Mcf per day. Panhandle appealed this action by the Commission to the United States Third Circuit Court of Appeals

upon the grounds that the Commission could not lawfully approve or prescribe maximum daily volumes in excess of its designed sales capacity of 850,000 Mcf per day.

Panhandle was upheld by the Court, which remanded the matter to the Commission with instructions that the Commission fairly allocated the designed or actual capacity of Panhandle's system, whichever is greater, among its customers.

Lengthy hearings have been held pursuant to that order and the matter is now awaiting decision by the Presiding Trial Examiner. Throughout those proceedings Panhandle contended that its winter peak-day sales capacity was 968,957 Mcf, exclusive of deliveries from line pack, and Panhandle insisted that line pack is not available for delivery on a firm basis to meet its contract obligations (T. 15726, Docket No. G-1116 *et al*).

It was shown during the hearings that Panhandle's total firm obligation is 1,009,360 Mcf per day (Exh. 736). *Thus*

it is clear that under Panhandle's own contentions its firm obligations exceed its maximum capacity by about 40,000 Mcf per day.

In its main brief, however, Panhandle argued that there was no necessity to allocate its gas supply among its customers this winter because its additional main line loops, constructed under temporary authorization of the Commission, would provide the needed capacity.

At the same time, however, Panhandle declared that its shortage could be eliminated if the Commission would permit it to abandon about 30 per cent of its service to Michigan Consolidated and completely

abandon service to Gas Service Company and Texas Gas Transmission Company.

Now Panhandle proposes to increase its firm obligations by virtually the total amount of its increased capacity. Under Panhandle's own contentions it does not have sufficient capacity to serve these total requirements. If Panhandle's contentions are incorrect and it does have the capacity, then there was no basis for its position and claims in the pending allocation proceedings.

The only other alternative is that Panhandle is asking the Commission to approve the increased contract volumes upon the unfounded assumption that Panhandle's applications for abandonment will be granted. This assumption is directly contrary to fact, for the Commission has already determined that the public interest will not permit Panhandle's proposed partial abandonment of service to Michigan Consolidated. Panhandle is now attempting to reserve this decision by seeking Commission authority to increase its firm obligations beyond its claimed capacity to serve.

The simple fact is that Panhandle itself contends that its firm obligations as determined by this Commission ex-

ceed its capacity by approximately 40,000 Mcf per day. It is obvious, therefore, that the additional capacity authorized by the Commission must first be utilized to overcome this claimed deficiency. This will provide approximately 60,000 Mcf of additional capacity to be divided among Panhandle's customers, on the basis of Panhandle's own calculations.

This allocation should only be made after a hearing to determine how the additional supply may be best utilized in the public interest.

IV

In its application for authority to operate its main line loops, Panhandle alleges that its customers require the increased supply proposed for the addition of firm loads, including space heating. The facts, however, are that not only does Panhandle not have—by its own statements—sufficient gas to serve these additional firm requirements, but *there is no assurance that any of the proposed additional volumes will be available to these general service and small general service customers to serve their new heating customers in the future.*

In its application in Docket No. G-2433 Panhandle proposes to increase its main line capacity by 100,000 Mcf per day by the addition of main line loops and by another 155,000 Mcf a day from the installation of additional horsepower in its compressor stations.

Panhandle states that it will dispose of 210,000 Mcf per day of this new main line capacity by selling additional gas to East Ohio Gas Company, Ohio Fuel Gas Company and Michigan Gas Storage Company. Panhandle said it had entered into agreements to sell this gas to East Ohio Gas Company and Ohio Fuel Gas Company and planned

to reach an agreement with Michigan Gas Storage Company. The Panhandle certificate application states:

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"Panhandle proposes to make the remaining additional main line capacity (approximately 45,000 Mcf per day) and the initial capacity resulting from the construction and operation of the Waverly Storage Field (approximately 150,000 Mcf deliverability) available to its customers with whom it has service agreements for the purchase of gas under the General (G) and Small General Service (SG) Rate Schedules of its tariff. The main line capacity will serve to meet the additional base load of such customers and the *storage facilities will be used to meet winter requirements of such customers due to space heating loads.*" (Italics added)

Panhandle then explained in its application that it was experimenting with the possible development of a storage field in an "underground dome field filled with salt water" near Waverly, Illinois. Panhandle did not even claim that the storage project was feasible, but it said it proposed to conduct further tests to "establish the workability of the field as a storage field."

There is no evidence before the Commission as to whether the experimental development of the storage area will be a success, or has proved to be a failure.

If this experiment is not successful then Panhandle, by its own representations to this Commission, will have no additional gas available to meet the future requirements of its general and small general service customers to serve new space heating loads. Panhandle has already sold its capacity resulting from the main line loops to other customers. Now it is attempting to sell the same gas once again for the addition of heating customers that it may be unable to serve in future years.

Panhandle itself recognized in its application in Docket No. G-2433, filed May 18, 1954, that it could not make any permanent allocation or distribution of the gas resulting from the construction of its loop facilities. In that application Panhandle said:

"It is contemplated that of the additional facilities proposed in this application, the loop lines providing additional capacity of approximately 100,000 Mcf per day will be completed on or before January 1, 1955. Panhandle proposes to dispose of this additional capacity *for the interim period* (approximately January 1, 1955—November 1, 1955) *to its limited service and general service customers* (with whom it has entered into service agreements), depending on the requirements of such customers, *during such period.*" (Italics added)

Now Panhandle proposes a permanent allocation, on an entirely different basis, for the purpose of adding firm loads, including space heating, that it may be unable to serve in the future.

V

Panhandle cites only one case before the Commission in support of its application for temporary authorization to operate its loop lines and in that connection it states: "The procedure here requested is almost identical with that adopted by the Commission in *Northern Natural Gas Company,* Docket No. G-2063."

No statement could be further from the facts.

The Northern Natural case cited by Panhandle did not even involve the issuance of a temporary certificate. Northern Natural was granted a certificate to construct certain main line facilities and

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while this construction work was in progress hearings were held to determine the disposition of the additional capacity among Northern's customers and those desiring new service. At one point during the course of the proceedings Northern requested that it be given a temporary authorization to operate certain of its new facilities, *but this request was denied* by order issued September 4, 1953 and the Commission directed that hearings be concluded before it reached a decision. This was done and the authorization to operate facilities cited by Panhandle was issued only after the conclusion of hearings and when the matter was before the Commission for final decision.

If the Commission follows the same procedure as in the Northern Natural case it would deny Panhandle's instant application and set the matter down for hearing.

Certainly Panhandle can make no claim that there has been a lack of opportunity for a public hearing on this matter or its primary certificate application. Such a hearing could have been held while the loop lines were under construction, but instead of seeking a hearing Panhandle twice obtained postponements of hearing dates set by the Commission in Docket G-2433 in an apparent effort to avoid public scrutiny of its expansion project. Any delays which may occur in proving additional gas service to Panhandle's customers are the sole responsibility of Panhandle.

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WHEREFORE, it is respectfully requested that Panhandle's application to operate its additional main line loops for the purposes proposed be denied and the Commission follow the procedure indicated by its temporary order authorizing construction of the facilities and conduct a hearing which will provide a sound basis for a "*determination by*

the Commission as to the disposition of such increased capacity required by the public interest."

It is further requested that the new service agreements filed by Panhandle on November 3, 1954, be rejected because Panhandle has not shown that it has the ability to meet these new contract demands and Panhandle's customers, including Michigan Consolidated, are entitled to be heard before any increased demands are added on the Panhandle system.

Pending a determination by the Commission of the fair and proper disposition of Panhandle's increased capacity, it is suggested that Panhandle may be authorized to operate its new facilities for the purpose of meeting its present firm obligations.

Respectfully submitted,

MICHIGAN CONSOLIDATED GAS COMPANY

By: /s/ CHARLES V. SHANNON
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UNITED STATES OF AMERICA
FEDERAL POWER COMMISSION

Before Commissioners: Jerome K. Kuykendall, Chairman; Nelson Lee Smith, Seaborn L. Digby and Frederick Stueck.

Dec. 21, 1954

In the Matters of

Panhandle Eastern Pipe Line Company	Docket Nos. G-1705, G-1937, G-2433, and G-2475
Indiana Gas & Water Company, Inc.	Docket No. G-1813
Indiana Gas & Water Company, Inc. v. Panhandle Eastern Pipe Line Company	Docket No. G-2023
Missouri Public Service Company	Docket No. G-2057
City of Montgomery, Missouri	Docket No. G-2932
Town Gas Company of Illinois	Docket No. G-3159

Order Granting Temporary Authorization to Operate Facilities

Panhandle Eastern Pipe Line Company (Panhandle), on May 18, 1954, filed its application at Docket No. G-2433 for a certificate of public convenience and necessity authorizing the construction and operation of facilities which would increase its maximum day delivery capacity by approximately 455,000 Mcf per day from an estimated 970,000 Mcf to 1,425,000 Mcf per day. By our telegraphic order issued September 2, 1954, Panhandle was granted temporary authorization to construct a portion of the applied for facilities which would increase its capacity by 100,000 Mcf per day or from 970,000 Mcf to 1,070,000 Mcf per day. Panhandle, on December 2, 1954, filed an application for temporary authorization to operate such

facilities and to make increased deliveries to certain customers in accordance with new service agreements which it has executed with such customers. Contained in the application is a specification of the customers and the increased winter contract demands which Panhandle proposes upon issuance of temporary authorization.[1] Under its proposal Panhandle would distribute among specified customers 98,305 Mcf of the additional capacity available from the facilities it has been temporarily authorized to construct.

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We have examined Panhandle's application for temporary authorization to operate the subject facilities and increase deliveries to some customers, and while we consider it reasonable that Panhandle be authorized to make use of the incremental pipe line capacity added to the system under the temporary authorization heretofore granted, we are of the opinion that Panhandle's proposal does not provide for an equitable distribution of the incremental capacity. This distribution completely ignores Panhandle's obligation to serve those of its customers with whom it has not executed service agreements and as to whom it seeks authorization to abandon service in the consolidated proceedings, Docket Nos. G-1116, *et al.*

Panhandle's peak day volumetric obligations to such customers are thoroughly discussed in our Opinions Nos. 218 and 218-A, *In the Matter of Panhandle Eastern Pipe Line Company, et al.*, Docket Nos. G-1116, *et al.*, 10 FPC 328 and 361 (1951), and we fixed the contract demands to these customers in Appendices A, B, C, and D of our

[1] Panhandle, on November 1, 1954, tendered for filing with the Commission 34 service agreements setting forth increased contract demands. These were rejected by letter of December 7, 1954, in that no authorization to operate the additional facilities had as yet been granted as required by Section 154.22 of the Commission's General Rules and Regulations.

order issued March 5, 1952 in those dockets.[2] We are of the opinion that if Panhandle were permitted to distribute its capacity in the fashion it proposes, its total obligation to deliver would exceed the estimated capacity of the pipe line. Thus, if we were to approve such distribution we might be placed in the position of acting contrary to the holding of the United States Court of Appeals for the Third Circuit that Panhandle's delivery obligation be fixed not to exceed the delivery capacity of the system. *Panhandle Eastern Pipe Line Company* v. *FPC*, 204 F. 2d 675 (1953).

Additionally, since at this time we are considering only Panhandle's request for temporary authorization to operate the added facilities, we cannot consider the permanent distribution of the incremental capacity in advance of the hearing upon the application filed in this proceeding. Panhandle, however, by reason of the terms of the newly executed service agreements with respect to the duration thereof would have us make long-term distribution of the added capacity. This we cannot do.

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Panhandle in its negotiations for the disposal of the 100,000 Mcf capacity has not offered gas to certain of its customers who may be entitled to it, and further, it has limited its offer of gas to existing customers without regard for applicants for gas under Section 7 (a) of the

[2] Panhandle's contract demands were fixed by paragraphs of the March 5, 1952 order which were set aside insofar as they required Panhandle to deliver from its transmission system more gas than its designed and approved or actual capacity, Mandate of the United States Court of Appeals for the Third Circuit, Case No. 10,761, issued August 5, 1953. Since as we find herein Panhandle, except for its Liberty Lateral, now has adequate capacity to serve the contract demands contained in service agreements filed by it and those fixed by the March 5, 1952 order, these ordering paragraphs must be considered to be in full force and effect except as to the volumes to be served from the Liberty Lateral.

Natural Gas Act and interveners whose requests for new service are elements of these consolidated proceedings. Parties to these proceedings having such interests must be heard before final distribution is made of the gas which will be available over and above Panhandle's obligations as previously determined and fixed and as ultimately may be determined as a result of these and other proceedings.

In recognition of the above we shall prescribe as a condition of the temporary authorization hereinafter granted an interim allocation of the capacity which it is estimated will be available from the pipe line. In prescribing such allocation we shall first make allowance for such gas as would permit Panhandle to serve the winter contract demands set forth in the presently effective filed service agreements, as well as those winter contract demands prescribed by our March 5, 1952 order in Docket Nos. G-1116, *et al.*, with the exception of those winter contract demands prescribed for customers served from the Liberty Lateral. With respect to the Liberty Lateral, which Panhandle has not improved to the extent that is necessary to permit it to deliver the winter contract demands prescribed by the March 5, 1952 order, we shall allocate volumes of gas consistent with the actual capacity of the lateral as evidenced by the 1953-1954 deliveries therefrom.

In determining the Liberty Lateral capacity, as well as in making our interim allocation of gas available from Panhandle's system, we have considered pertinent evidence of record in the Docket Nos. G-1116, *et al.*, proceedings which has been certified to us in connection with the Interim Decision and Order of the Presiding Examiner issued December 14, 1954. The instant order, however, is not to be considered as constituting a final determination on the Examiner's decision, and it is, of course, without prejudice to the Examiner's initial decision in the future on such issues which he has reserved for determination.

Further, in this order we will reserve a volume of 1,000

Mcf for possible delivery to Northern Indiana Fuel and Light Company, if, upon our consideration of the record in Docket Nos. G-1116, *et al.*, including any exceptions which may be filed to the Presiding Examiner's December 14, 1954 decision therein, such service is finally authorized.

With Panhandle's capacity of 1,070,000 Mcf per day, the volume of gas remaining after we make allowance for that portion of the additional 100,000 Mcf which will permit Panhandle to meet its previously fixed main line obligations while providing 24,173 Mcf for the Liberty Lateral, is 66,842 Mcf. The reservation of 1000 Mcf for Northern Indiana Fuel and Light

Company leaves 65,842 Mcf available for temporary allocation. This we shall distribute on a temporary basis for the present winter period, a final determination of the distribution to await our consideration of the record in these consolidated proceedings, hearings in which are to commence on January 4, 1955. In making this temporary distribution, the results of which are shown in Appendix A, we have allowed the 34 customers to whom Panhandle proposes permanent increases in contract demand, temporarily increased contract demands which reduce Panhandle's proposals in the proportion the total gas temporarily distributed bears to the 98,305 Mcf by which Panhandle proposed to increase the contract demands.

The Commission *finds:*

(1) Subject to the terms and conditions hereinafter set forth, Panhandle should be granted temporary authorization to operate the facilities, construction of which was temporarily authorized by the Commission's telegraphic order issued September 2, 1954.

(2) Upon commencement of operation of the facilities referred to in Finding (1) above Panhandle will have adequate capacity to serve the contract demands set forth in service agreements presently of file with the Commission and in Appendices A, B, C, and D of the Commission's order issued March 5, 1952, *In the Matter of Panhandle Eastern Pipe Line Company, et al.*, Docket Nos. G-1116, *et al.*, with the exception of the contract demands of customers being served from the Liberty Lateral.

(3) Pending further decision of the Presiding Examiner in Docket Nos. G-1116, *et al.*, and without prejudice to such decision, Panhandle's total peak day volumetric obligation on the Liberty Lateral should be 24,173 Mcf, this obligation to be distributed as shown in Appendix A hereto.

(4) From the date of issuance of this order until March 31, 1955, Panhandle's contract demands shall be amended as is provided in Appendix A hereto.

The Commission *orders:*

(A) Subject to the terms and conditions hereinafter set forth, Panhandle be and the same is hereby granted temporary authorization to operate the facilities, construction of which was temporarily authorized by the Commission's telegraphic order issued September 2, 1954.

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(B) From the date of issuance of this order until March 31, 1955, Panhandle's contract demands as provided in its service agreements on file with the Commission and in Appendices A, B, C, and D of the Commission's March 5, 1952 order, *In the Matter of Panhandle Eastern Pipe Line Company,* Docket Nos. G-1116, *et al.*, be

and the same are hereby amended as provided in Appendix A hereto.

(C) This order is without prejudice to: (i) the Commission's final decision upon exceptions which may be filed to the Presiding Examiner's Interim Decision and Order issued December 14, 1954 in Docket Nos. G-1116, *et al.*, (ii) those issues which the Presiding Examiner has reserved for future decision in Docket Nos. G-1116, *et al.*, and (iii) the Commission's final determination herein.

(D) A copy of this order shall be inserted by the Secretary in Panhandle's tariff on file with the Commission and shall be placed by Panhandle in the posted copy of its tariff in its offices.

By the Commission.

J. H. GUTRIDE
Acting Secretary

Adopted: December 21, 1954
Issued: December 22, 1954

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APPENDIX A

PANHANDLE EASTERN PIPE LINE COMPANY

AMENDED CONTRACT DEMANDS UNTIL MARCH 31, 1955

Service, Zone and State	Winter Contract Demands (Mcf) in Filed Service Agreements or Prescribed by March 5, 1952 Order	Temporary Winter Contract Demands (Mcf) Until March 31, 1955
(1)	(2)	(3)
Main Line		
General Service		
Eastern Zone		
Indiana		
Central Indiana Gas Co.	85,000	95,040
Greenfield Gas Co.	3,775	4,260
Indiana Gas Distribution Corp.	4,850	6,625
Indiana Gas and Water Co.	45,000	48,350
Citizens Gas and Coke Utility	30,000	36,700
Kokomo Gas and Fuel Co.	17,000	20,350
Northern Indiana Public Service Co.	45,000	46,340
Ohio Valley Gas Corp.	3,200	4,405
Richmond Gas Corp.	8,200	8,735
Ohio		
Ohio Gas Co.	12,200	13,270
Toledo Edison Co.	3,000	3,670
Michigan		
Battle Creek Gas Co.	15,000	16,340
Citizens Gas Fuel Co.	4,300	5,305
Michigan Gas Utilities Co.	11,000	12,340
Southeastern Michigan Gas Co.	16,200	18,745
Michigan Gas Storage Co.	60,000	60,000
Central Zone		
Missouri		
Citizens Gas Co. of Hannibal	10,000	10,670
Fulton, City of	4,800	5,940
Gas Service Co.	11,695	11,695
Missouri Edison Co.	3,500	3,565
Missouri Power and Light Co.	36,750	38,090
Missouri Utilities Co.	15,000	16,675
Missouri Western Gas Co.	2,785	2,995
Illinois		
Central Illinois Electric & Gas Co.	6,050	6,420
Central Illinois Light Co.	99,900	106,665
Central Illinois Public Service Co.	37,800	41,285
Citizens Gas Co.	6,300	8,110
Illinois Power Co.	67,000	75,700
Western Zone		
Kansas		
Gas Service Co.	11,979	11,979
Total General Service	677,284	740,264

Service, Zone and State	Winter Contract Demands (Mcf) in Filed Service Agreements or Prescribed by March 5, 1952 Order	Temporary Winter Contract Demands (Mcf) Until March 31, 1955
(1)	(2)	(3)
Main Line		
Small General Service		
Eastern Zone		
Indiana		
Indiana Gas Distribution Corp.	1,100	1,100
Lapel, Town of	600	870
Montezuma, Town of	606	1,205
Pendleton Natural Gas Co.	1,600	1,850
Pittsboro, Town of	350	385
Roachdale, Town of	500	567
Ohio		
Central States Natural Gas Co.	1,500	1,830
Dayton Power and Light Co.	750	750
Ohio Fuel Gas Co. (Rural)	100	100
Central Zone		
Missouri		
Bowling Green Gas Co.	1,999	1,999
Illinois		
Morton Municipal Gas Co.	1,975	2,660
Pittsfield, City of	1,975	2,595
Roodhouse, City of	1,900	1,900
Whitehall, City of	1,900	1,900
Western Zone		
Kansas		
American Gas Co.	1,675	1,675
Miami Pipe Line Co.	1,950	1,950
Total Small General Service	20,474	23,336
Main Line		
Limited Service		
East Ohio Gas Co.	85,000	85,000
Michigan Consolidated Gas Co.	2,000	2,000
Michigan Consolidated Gas Co.	125,000	125,000
Ohio Fuel Gas Co.	50,000	50,000
Texas Gas Transmission Corp.	18,000	18,000
Total Limited Service	280,000	280,000
Storage Service		
Michigan Gas Storage Co.	—	—
Total Main Line Sales for Resale	977,758	1,043,600

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Service, Zone and State	Winter Contract Demands (Mcf) in Filed Service Agreements or Prescribed by March 5, 1952 Order	Temporary Winter Contract Demands (Mcf) Until March 31, 1955
(1)	(2)	(3)
Liberty Lateral		
Central Zone		
Missouri		
Central West Utility Co.	10,000	5,540
Gas Service Co.	17,375	15,180
Missouri Power and Light Co.	2,250	2,909
Kansas		
Louisburg Gas Co.	750	544
	30,375	24,173
Total Sales for Resale	1,008,133	
Firm Direct Sales[1]	1,227	1,227
Total Sales	1,009,360	1,069,000

[1] Residential and commercial sales north of Texas and Oklahoma.

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Docket No. G-2433

In the Matter of

PANHANDLE EASTERN PIPE LINE COMPANY

SMITH, Commissioner, *concurring:*

I concur in the issuance of the conditional temporary operating certificate authorized herein because: (1) facilities estimated to cost some $23,000,000 have been constructed and are capable of delivering nearly 100,000 Mcf of natural gas daily for public use and consumption; and (2) the authorization, as granted, probably protects the interests of Panhandle's present and prospective cus-

tomers as fully as is now possible under the circumstances. I would not, however, wish my acquiescence at this stage to be interpreted as approval of the course which has been followed in dealing with this matter.

On June 30, 1954, this Commission acted on Panhandle's first request for temporary authority, filed June 10, 1954, to construct and operate these same main line transmission pipeline loops, aggregating about 295 miles and designed to enlarge its system capacity by about 100,000 Mcf per day. By telegram of that date, it advised Panhandle its request was denied because:

". . . [it] does not come within the purview of the authority of this Commission to grant and, further, because of uncertainties as to adequacy of gas supply and specific markets to which gas may be delivered [which] appear to require hearing before construction is commenced . . ."

Subsequently formal objections to the granting without hearing of the temporary authority which had been requested were filed by the Michigan

Consolidated Gas Company, the City of Detroit, and the National Coal Association, United Mine Workers of America, Fuels Research Council, Inc., and Anthracite Institute.

On July 30, 1954, Panhandle filed its second request for such temporary authority covering the construction and operation of the same facilities, but citing certain allegedly analogous situations in which temporary authorizations have been issued, calling attention in general terms to the gas reserves relied upon, and submitting a proposed plan for the disposition of the proposed additional 100,000 Mcf of daily capacity to certain selected customers, which was subsequently modified substantially in the instant application.

On September 2, 1954, the Commission by telegram granted the temporary authority sought in the application of June 10, 1954, but limited this authorization to construction only, reserving "authorization to operate the subject facilities . . . pending a determination by the Commission as to the disposition of such increased capacity required by the public interest" and including the usual saving language that "this is without prejudice to such ultimate disposition of the Docket No. G-2433 application as the record may require".

On the grounds that no new questions of fact or law had been averred, applications of the above-named objectors, except the City of Detroit, for rescission or rehearing and stay were denied on November 1, 1954, construction of the facilities having proceeded in the meantime. This was followed by the December 2, 1954, application for

temporary authority to operate, supported by service agreements revising the proposed distribution of the additional gas, which is further modified substantially by our order herein.

Confronted by what is virtually a *fait accompli*, with Panhandle's investment made and its facilities available to supply desired gas to some of its customers, it is hard to see what useful public purpose would now be served by my objecting to permitting the utilization of these facilities to bring gas to consumers and revenues to the pipeline; therefore I concur in the present action of the Commission. However, I think it should be emphasized that, in my opinion, the action of June 30, 1954, denying the temporary authority then sought was correct and sound on grounds of both law and policy, and should not have been reversed on September 2, 1954.

(18352)

As I see it, no emergency, within the meaning of Section 7 of the Act and the Commission's Rules and Regulations thereunder, existed on either of those dates, and no valid grounds were presented to justify the issuance of the temporary certificate authorizing the construction of these facilities. Quite apart from the incomplete showing as to gas reserves and the doubtful status of the gas purchase contracts with uncertificated producers—and aside from the necessary interrelationships of this proceeding with other pending matters involving Panhandle's rates and services, including the remand of Dockets No. G-1116, *et al.*, from the Court of Appeals for the Third Circuit and pending Section 7(a) proceedings—I have grave question as to whether

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those objecting to the issuance of the temporary certificate, as well as Panhandle's present and prospective customers who are not favored with additional gas supplies under this arrangement, have been afforded their proper measure of due process.

While the Commission has frequently, upon a proper showing of emergency and without hearing, issued temporary authorizations for relatively minor enlargements of pipeline systems (as in Docket No. G-1705 when Panhandle was permitted to add 50,000 Mcf to its designed system capacity at a cost of approximately $3,000,000), it has never, so far as I have been able to discover, permitted on such a basis the construction or operation of anything approaching the major expansion here provided for. The largest project of the sort for which I have been able to find previous temporary authorization is that provided for in Docket No. G-989 where, on April 7, 1948, Tennessee Gas Transmission Company was permitted to enlarge its capacity by 60,000 Mcf per day at a cost of

$11,739,500, with jurisdiction specifically retained as to the ultimate disposition of the gas to be delivered thereby. This, however, was preceded by several days of hearing and was not opposed. The other cases relied upon by Panhandle—including Docket No. G-1302, Michigan-Wisconsin Pipe Line Company, and Docket No. G-1618, Northern Natural Gas Company—are, in my view, completely inapposite, since the temporary authorizations therein were granted only after a full development of affirmative evidence upon a record and were, in reality, unopposed.

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To me it seems clear that the Congress, when it amended the Act in 1942, intended that hearings should be mandatory before certificates are issued under Section 7, except in cases involving emergency situations and minor changes. We should be careful, as a matter of law, to guard against the circumvention of this requirement. And this becomes doubly important as a matter of policy since, as the history of this proceeding so well demonstrates, any authorization once given—no matter how hedged with saving clauses—as a practical matter cannot well be withdrawn, or even held in check.

. . . . . .

NELSON LEE SMITH, *Commissioner*

Filed: December 21, 1954
Issued: December 22, 1954

18411

Filed January 11, 1955

Re: Panhandle Eastern Pipe Line Company,
Docket Nos. G-1705, G-1937, G-2433 and G-2475;
Missouri Public Service Company,
Docket No. G-2057;
City of Montgomery, Missouri
Docket No. G-2932;
Town Gas Company of Illinois,
Docket No. G-3159;
Columbian Fuel Corporation,
Docket Nos. G-4308 and 4310;
United Carbon Company, Inc., (Maryland),
Docket Nos. G-4309 and G-4316;
United Producing Company, Inc.,
Docket Nos. G-4314 and G-4328;
Coltexo Corporation,
Docket No. G-4315;
Missouri Central Natural Gas Company,
Docket No. G-4611;
Village of Westville, Illinois,
Docket No. G-4666;
Village of Pleasant Hill, Illinois,
Docket No. G-4940;
City of Waverly, Illinois,
Docket No. G-5139;
Village of Rossville, Illinois,
Docket No. G-5979

Presiding Examiner's Report to Commission of Motion to Dismiss Docket No. G-2475

MEMORANDUM FOR THE COMMISSION:
(Through the Chief Examiner)

In Docket No. G-2475, one of the matters involved in the above-entitled consolidated proceeding, Panhandle has applied for authorization pursuant to Section 3 of the Natural Gas Act for the export of up to 15,500,000 Mcf of gas per year to Union Gas Company of Canada.

Michigan Consolidated Gas Company is an intervenor in Docket No. G-2475 in opposition to the proposed export to Canada.

The undersigned Examiner hereby reports to the Commission for consideration and disposition a motion which Michigan Consolidated has made that the application in Docket No. G-2475 be dismissed. This motion was made at the session of the hearing on January 10, 1955 (Tr. 643), at which time Panhandle was about to commence the introduction of evidence in support of its application in such proceeding.

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Counsel for the National Coal Association and other coal interests joined in the motion (Tr. 646-47).

The Examiner is continuing with the hearing pending action by the Commission upon the motion. However, if the motion be valid, dismissal of the case would obviate the necessity for extended cross-examination of the witnesses for Panhandle and the Canadian intervenors supporting Panhandle's application, which cross-examination is at present being largely deferred.

The grounds of the motion are that Panhandle is required by its tariff and by orders of the Commission to sell the gas to its utility customers in the United States

if they want the gas; that Michigan Consolidated is ready, willing and able to purchase the gas which Panhandle proposes to sell to the Canadian Company; that consequently, the proposed sale to the Canadian Company is illegal and detrimental to the interests of the people of the United States. These grounds and related argument are set out with particularity at pages 640-44 of the transcript.

Panhandle's argument in opposition to the motion to dismiss appears at pages 644-46 of the transcript.

The pertinent portions of the transcript are transmitted herewith.

HOWELL PURDUE
Howell Purdue
Presiding Examiner

January 11, 1955.
HP:hs

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UNITED STATES OF AMERICA

FEDERAL POWER COMMISSION

Before Commissioners: Jerome K. Kuykendall, Chairman; Claud L. Draper, Nelson Lee Smith, Seaborn L. Digby and Frederick Stueck.

In the Matters of

Panhandle Eastern Pipe Line Company	Docket Nos. G-1705, G-1937, G-2433 and G-2475
Missouri Public Service Company	Docket No. G-2057
City of Montgomery, Missouri	Docket No. G-2932
Town Gas Company of Illinois	Docket No. G-3159
Columbian Fuel Corporation	Docket Nos. G-4308 and G-4310
United Carbon Company, Inc. (Maryland)	Docket Nos. G-4309 and G-4316
United Producing Company, Inc.	Docket Nos. G-4314 and G-4328
Coltexo Corporation	Docket No. G-4315
Missouri Central Natural Gas Company	Docket No. G-4611
Village of Westville, Illinois	Docket No. G-4666
Village of Pleasant Hill, Illinois	Docket No. G-4940
City of Waverly, Illinois	Docket No. G-5139
Village of Rossville, Illinois	Docket No. G-5979

Order Denying Motions to Dismiss Proceedings and Granting Motions to Sever Other Proceedings

During hearing in these proceedings, counsel for Michigan Consolidated Gas Company moved on January 4, 1954 that Docket No. G-2433 be dismissed and on January 10, 1954 that Docket No. G-2475 be dismissed. Such motions were concurred in by counsel for National Coal Association, United Mine Workers of America, Fuels Research Council, Inc., and the Anthracite Institute.

On January 4, 1954, counsel for Columbian Fuel Corporation and Coltexo Corporation and counsel for United

Carbon Company, Inc. (Maryland) and United Producing Company, Inc., moved that Docket Nos. G-4308, G-4309, G-4310, G-4314, G-4315, G-4316, and G-4328 be severed from these consolidated proceedings.

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The Commission *finds:*

(1) Good cause has not been shown for granting motions to dismiss Docket Nos. G-2433 and G-2475.

(2) Good cause has been shown for granting the motion to sever Docket Nos. G-4308, G-4309, G-4310, G-4314, G-4315, G-4316, and G-4328.

The Commission *orders:*

(A) The motions to dismiss Docket Nos. G-2433 and G-2475 be and the same are hereby denied.

(B) The motion to sever Docket Nos. G-4308, G-4309, G-4310, G-4314, G-4315, G-4316, and G-4328 from these consolidated proceedings be and the same is hereby granted.

By the Commission.

LEON M. FUQUAY
Leon M. Fuquay,
Secretary.

Adopted: January 13, 1955
Issued: January 20, 1955

18607

BEFORE THE
FEDERAL POWER COMMISSION

Docket No. G-8665

In the Matter of
PANHANDLE EASTERN PIPE LINE COMPANY

Petition of Michigan Consolidated Gas Company for Leave to Intervene

Comes now Michigan Consolidated Gas Company ("Michigan Consolidated") and, pursuant to Section 1.8 of the Federal Power Commission's Rules of Practice and Procedure, respectfully petitions for leave to intervene in the application of Panhandle Eastern Pipe Line Company ("Panhandle") in the above-captioned proceeding. In support of this petition, Michigan Consolidated respectfully shows:

I.

All correspondence and communications concerning this petition are to be addressed to each of the following:

Henry Tuttle, President
Michigan Consolidated Gas Company
415 Clifford Street
Detroit 26, Michigan

Hugh C. Daly, Vice President
Michigan Consolidated Gas Company
1523 L Street, N. W.
Washington, D. C.

Charles V. Shannon
Wheat, May and Shannon
520 Shoreham Building
Washington 5, D. C.

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II.

Michigan Consolidated is a public utility engaged in the purchase, transportation and distribution of natural gas in various cities and communities within the State of Michigan, including the metropolitan areas of Detroit and Ann Arbor.

Michigan Consolidated purchases from Panhandle 125,000 Mcf of natural gas per day at Detroit and 2,000 Mcf per day at Ann Arbor. By reason of these purchases Michigan Consolidated has long been and is now one of Panhandle's largest customers.

III.

On March 25, 1955 Panhandle filed its application in the above-captioned proceeding for a certificate of public convenience and necessity authorizing the construction and operation of certain additional compressor facilities on its main pipe line system east of Tuscola, Illinois, designed to enable Panhandle to purchase from Trunkline Gas Company ("Trunkline") and transport to certain of its customers an additional 80,000 Mcf of natural gas on its winter peak day, 1955-56.

Panhandle requests that its application be consolidated for purposes of hearing with the companion application of Trunkline filed on the same day at Docket No. G-8664,

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wherein Trunkline seeks authority to construct and operate certain compressor and loop line facilities designed to increase the present peak day capacity of the Trunkline system from approximately 290,000 Mcf to 375,000 Mcf by the end of 1955.

The estimated total cost of the additional main line compressor facilities proposed in Panhandle's application is stated to be $3,714,000.

IV.

Pursuant to authorization granted in Docket Nos. G-382, G-1317, *et al.*, and under the terms of a service agreement between the companies, Panhandle is presently entitled to purchase the initial capacity of its corporate affiliate, Trunkline, less such volumes of gas as Trunkline has been authorized or directed by the Commission to sell to others.

Since the completion of Trunkline's pipe line in 1951 Panhandle has purchased peak day supplies of approximately 290,000 Mcf of natural gas from Trunkline for resale to its various customers.

In contemplation of the new capacity proposed in its instant application and that of Trunkline at Docket No. G-8664, Panhandle has entered into a new service agreement with Trunkline, dated February 21, 1955, which provides that Panhandle will be entitled and required to purchase the entire capacity of Trunkline's pipe line system, less such volumes

as the Commission may direct or authorize Trunkline to sell to others. Under this new agreement Panhandle states that it will be entitled to peak day deliveries from Trunkline of 370,000 Mcf.

V.

Trunkline's application in Docket No. G-8664 shows that company has entered into no new gas purchase contracts covering the additional volumes of gas required to meet the increase in capacity contemplated by its application and relied upon by Panhandle in its application herein.

Instead, it appears that the increased volumes of gas called for will result from Trunkline's renegotiation of its gas purchase contracts with four of its suppliers at redetermined prices substantially higher than those provided for under its superseded contracts with those suppliers.

Under the cost of service formula by which Trunkline's charges to Panhandle are determined, this increase in the cost of gas to Trunkline will be reflected automatically in Panhandle's payments to its subsidiary, Trunkline, and will inevitably result in higher rates being charged by Panhandle to its resale customers, including Michigan Consolidated.

VI.

In the proposed allocation of its estimated peak day sales capacity during the winter of 1955-56, which allocation includes the additional 80,000 Mcf per day from Trunkline

sought in the instant application as well as an increase in capacity from facilities proposed in Docket Nos. G-1705, G-2433, *et al.*, Panhandle proposes a reduction of 30% in its long standing deliveries to Michigan Consolidated at Detroit.

At the same time Panhandle proposes a further large increase in the rates charged its resale customers, including Michigan Consolidated, upon completion of the facilities sought herein. In the case of its LS-1 Rate Schedule—the rate schedule under which Panhandle sells gas to Michigan Consolidated—Panhandle proposes a substantial increase in its presently effective rate.

VII.

In light of the foregoing, Michigan Consolidated has a direct and vital interest in the application of Panhandle at Docket No. G-8665, which is not adequately represented by the existing parties and as to which Michigan Consolidated may be bound by the Commission's action in this proceeding.

Michigan Consolidated therefore desires to intervene in the aforementioned application of Panhandle for the purpose of protecting its interests as they may appear.

WHEREFORE, Michigan Consolidated respectfully requests that it be granted leave to intervene in the applica-

tion of Panhandle at Docket No. G-8665 with the full rights of a party including the right to cross-examine witnesses, introduce evidence and be heard in brief and oral argument.

Respectfully submitted,

MICHIGAN CONSOLIDATED GAS COMPANY

By CHARLES V. SHANNON
Its Attorney

CHARLES V. SHANNON
WHEAT, MAY AND SHANNON
520 Shoreham Building
Washington 5, D. C.
Attorney for
Michigan Consolidated Gas Company

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UNITED STATES OF AMERICA
FEDERAL POWER COMMISSION

Docket No. G-8665

In the Matter of
PANHANDLE EASTERN PIPE LINE COMPANY

Notice of Intervention

Now comes the Michigan Public Service Commission, comprised of John H. McCarthy, Chairman, William B. Elmer and Maurice E. Hunt, Commissioners, constituting said Public Service Commission, a statutory regulatory body having jurisdiction under the laws of the State of Michigan over sales and service of natural gas to consumers within the State of Michigan, including direct sales and service to consumers within said state by interstate pipe-line companies, and hereby files Notice of Intervention under §§ 1.8 and 1.37(f) of the Federal Power Commission's Rules of Practice and Procedure, and respectfully requests that it be entered upon the Federal Power

Commission records as an intervenor in the above proceedings.

MICHIGAN PUBLIC SERVICE COMMISSION

By THOMAS M. KAVANAGH
Attorney General
State of Michigan

and

ROBERT A. DERENGOSKI
Assistant Attorney General

By /s/ ROBERT A. DERENGOSKI
Assistant Attorney General

Lansing, Michigan
Dated: April 29, 1955

Attest:
/s/ S. A. LUND
Secretary

Business Address:
5th Floor, Lewis Cass Bldg.
Lansing 13, Michigan

18776

UNITED STATES OF AMERICA
FEDERAL POWER COMMISSION

Before Commissioners: Jerome K. Kuykendall, Chairman; Claude L. Draper, Seaborn L. Digby, Frederick Stueck and William R. Connole.

In the Matters of

PANHANDLE EASTERN PIPE LINE COMPANY	Docket Nos. G-1705, G-1937, G-2433, G-2475, and G-8665
MISSOURI PUBLIC SERVICE COMPANY	Docket No. G-2057
CITY OF MONTGOMERY, MISSOURI	Docket No. G-2932
TOWN GAS COMPANY OF ILLINOIS	Docket No. G-3159
MISSOURI CENTRAL NATURAL GAS COMPANY	Docket No. G-4611
VILLAGE OF WESTVILLE, ILLINOIS	Docket No. G-4666
VILLAGE OF PLEASANT HILL, ILLINOIS	Docket No. G-4940
CITY OF WAVERLY, ILLINOIS	Docket No. G-5139
VILLAGE OF ROSSVILLE, ILLINOIS	Docket No. G-5979
CENTRAL ILLINOIS ELECTRIC & GAS COMPANY	Docket No. G-8428
CITY OF WINCHESTER, ILLINOIS	Docket No. G-8431
VILLAGE OF FRANKLIN, ILLINOIS	Docket No. G-8471
CITY OF HICKMAN, KENTUCKY	Docket No. G-8526
TRUNKLINE GAS COMPANY	Docket No. G-8664
CITY OF McLEANSBORO, ILLINOIS	Docket No. G-8676
CITY OF VIENNA, ILLINOIS	Docket No. G-8677
CITY OF CLINTON, KENTUCKY	Docket No. G-8771
CITY OF LaCENTER, KENTUCKY	Docket No. G-8888
CITY OF BARDWELL, KENTUCKY	Docket No. G-8939
CITY OF WICKLIFFE, KENTUCKY	Docket No. G-8962
LAKE COUNTY UTILITY DISTRICT	Docket No. G-8963

Order Consolidating and Reconvening Proceedings and Specifying Procedure

On May 9, 1955, Panhandle Eastern Pipe Line Company (Panhandle) at hearings on Docket No. G-1705, et al. moved the Presiding Examiner to recess the proceedings until further order of the Commission. A major portion

of these proceedings had concerned Panhandle's plans for the development of a natural-gas storage area near Waverly, Illinois, whereby it was anticipated that 200,000 Mcf per day of natural gas would be made available for the use of Panhandle's customers on a firm basis. In its motion Panhandle stated that serious operating difficulties had been encountered in connection with the storage project, and it was not anticipated that natural gas would be immediately available therefrom.

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On June 7, 1955, Panhandle filed a motion to resume the proceedings in Docket No. G-1705, et al. and to consolidate therewith Trunkline Gas Company's (Trunkline) application for a certificate of public convenience and necessity at Docket No. G-8664 and Panhandle's application for a certificate of public convenience and necessity at Docket No. G-8665. These latter applications propose the construction and operation of facilities whereby Trunkline's peak day capacity will be increased by 85,000 Mcf per day, of which 80,000 Mcf is to be made available to Panhandle for transportation and sale to its customers. The remaining 5,000 Mcf per day is apparently proposed to be sold to customers along the route of Trunkline's pipe line.

A number of applications, pursuant to Section 7(a) of the Natural Gas Act, have been filed with the Commission for orders directing Trunkline to interconnect its facilities with those of the respective applicants and to sell natural gas thereto. These applications have been designated Docket Nos. G-8526, G-8676, G-8677, G-8771, G-8888, G-8939, G-8962, and G-8963, and the Applicants' names are listed in the caption hereof.

In addition to the 80,000 Mcf per day proposed to be available to Panhandle by reason of the facilities for which authorization is sought at Docket Nos. G-8664 and G-8665,

Panhandle states in its motion that it proposes to increase its system delivery capacity by another 80,000 Mcf per day. This is to be accomplished by changes in compressor station piping and by an increase in the maximum working pressure of Panhandle's line 200, and it is indicated that Panhandle is presently proceeding to make such modifications in its facilities and operations without certificate authorization from this Commission. The propriety of Panhandle's actions in this regard must be an issue to be considered in these proceedings, particularly in view of the effect the increased deliveries might have on Panhandle's reserves and the general operation of its pipe line.

The Commission *finds:*

(1) It is appropriate and in the public interest to consolidate for the purpose of hearing the proceedings in the caption hereof.

(2) It is appropriate and in the public interest in carrying out the provisions of the Natural Gas Act that the hearing in this proceeding be reconvened at the time and place and on the date hereinafter designated, in accordance with the procedure hereinafter provided and ordered.

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The Commission *orders:*

(A) The proceedings in the caption hereof be and the same are hereby consolidated for the purpose of hearing.

(B) The hearing in these proceedings, as consolidated herein, shall reconvene commencing on July 12, 1955, at 10:00 a.m. in a Hearing Room of the Federal Power Commission, 441 G Street, N. W., Washington, D. C.

(C) At the reconvening of the hearing, Panhandle, Trunkline, and the applicants who have filed applications

pursuant to Section 7(a) of the Natural Gas Act, which have been consolidated by this order, shall first present and complete their direct cases. Opportunity shall then be provided for appropriate presentations by intervening parties, including those of Panhandle's existing customers who desire to present evidence in support of requests for increased natural gas deliveries. There shall then follow cross-examination of all parties who have not yet been cross-examined, and rebuttal evidence to the presentations of such parties. The Presiding Examiner shall provide for recess at an appropriate stage of the proceedings consistent with the Commission's announced policy for the suspension of hearings during the period August 1 through September 5, 1955.

By the Commission. Commissioner Connole not participating.

LEON M. FUQUAY,
Secretary.

Adopted: June 23, 1955
Issued: June 27, 1955

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UNITED STATES OF AMERICA

FEDERAL POWER COMMISSION

Before Commissioners: Jerome K. Kuykendall, Chairman; Claude L. Draper, Seaborn L. Digby, Frederick Stueck and William R. Connole.

In the Matters of

Panhandle Eastern Pipe Line Company	Docket Nos. G-1705, G-1937, G-2433, G-2475, and G-8665
Missouri Public Service Company	Docket No. G-2057
City of Montgomery, Missouri	Docket No. G-2932
Town Gas Company of Illinois	Docket No. G-3159
Missouri Central Natural Gas Company	Docket No. G-4611
Village of Westville, Illinois	Docket No. G-4666
Village of Pleasant Hill, Illinois	Docket No. G-4940
City of Waverly, Illinois	Docket No. G-5139
Village of Rossville, Illinois	Docket No. G-5979
Central Illinois Electric & Gas Company	Docket No. G-8428
City of Winchester, Illinois	Docket No. G-8431
Village of Franklin, Illinois	Docket No. G-8471
City of Hickman, Kentucky	Docket No. G-8526
Trunkline Gas Company	Docket No. G-8664
City of McLeansboro, Illinois	Docket No. G-8676
City of Vienna, Illinois	Docket No. G-8677
City of Clinton, Kentucky	Docket No. G-8771
City of LaCenter, Kentucky	Docket No. G-8888
City of Bardwell, Kentucky	Docket No. G-8939
City of Wickliffe, Kentucky	Docket No. G-8962
Lake County Utility District	Docket No. G-8963

Order Permitting Interventions

On March 1, 1955, Michigan Consolidated Gas Company filed a petition seeking leave to intervene in Docket No. G-8428, and on March 24, 1955 a petition seeking leave to intervene in Docket Nos. G-8431 and G-8471.

On March 11, 1955 Central Illinois Public Service Company filed a petition seeking leave to intervene in the consolidated proceedings in Docket Nos. G-1705, G-1937, G-2433, G-2475, G-2057, G-2932, G-3159, G-4611, G-4666, G-4940, G-5139, G-5979, and G-8428.

Petitions seeking leave to intervene in Docket Nos. G-8664 and G-8665 have been filed as follows:

Docket No. G-8664

Petitioner	Date Filed
Michigan Consolidated Gas Company	April 11, 1955
City of Clinton, Kentucky	April 29, 1955
Lake County Utility District (Tennessee)	May 5, 1955
City of Wickliffe, Kentucky	May 12, 1955
City of Bardwell, Kentucky	May 16, 1955
The Ohio Fuel Gas Company	May 24, 1955

Docket No. G-8665

Michigan Consolidated Gas Company	April 11, 1955
Battle Creek Gas Company	April 25, 1955
Michigan Gas Utilities Company	April 25, 1955
Central Indiana Gas Company	April 27, 1955
The Ohio Fuel Gas Company	May 2, 1955
Central Illinois Light Company	May 4, 1955
Kokomo Gas and Fuel Company	May 6, 1955
Greenfield Gas Company, Inc.	May 16, 1955
Richmond Gas Corporation	May 16, 1955
City of Montgomery, Missouri	May 18, 1955
Missouri Central Natural Gas Company	May 18, 1955
Village of Rossville, Illinois	May 23, 1955
Village of Westville, Illinois	May 23, 1955

Docket Nos. G-8664 and G-8665

The East Ohio Gas Company	May 20, 1955
Central Illinois Electric and Gas Company	May 23, 1955
Michigan Gas Storage Company	May 25, 1955
National Coal Association, United Mine Workers of America, Fuels Research Council, Inc., and Anthracite Institute	May 25, 1955
Town Gas Company of Illinois	May 27, 1955
County of Wayne, Michigan	June 14, 1955

In addition to the above petitions to intervene, there was filed on May 26, 1955 an out-of-time notice of intervention in Docket No. G-8664 by the Public Service Commission of Kentucky.

The Commission *finds:*

(1) Although some of the above-listed petitions for leave to intervene and the notice of intervention of the Public Service Commission of Kentucky in Docket No. G-8664 were not filed within the time required by Section 1.8 of the Commission's General Rules and Regulations, good cause exists to permit the late filing.

(2) The participation of the above named persons may be in the public interest.

The Commission *orders:*

The above-named persons be and they hereby are permitted to become interveners in the above-entitled proceedings, subject to the rules and regulations of the Commission: *Provided, however,* That the participation of such interveners shall be limited to matters affecting asserted rights and interests specifically set forth in such petitions for leave to intervene: and *Provided, further,* That the admission of such interveners shall not be construed as recognition by the Commission that they might be aggrieved because of any order or orders of the Commission entered in this proceeding.

By the Commission. Commissioner Connole not participating.

LEON M. FUQUAY,
Secretary.

Adopted: June 23, 1955
Issued: June 27, 1955

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BEFORE THE FEDERAL POWER COMMISSION

Dockets Nos. G-1705, G-2433, G-8664, G-8665, et al

In the Matter of

PANHANDLE EASTERN PIPE LINE COMPANY

Motion to Dismiss and Answer of Central West Utility Company to Panhandle's Application for Temporary Authority. Request for Oral Argument and Memorandum in Support of Above Matters

Central West Utility Company is an Intervenor herein. It is engaged in the purchase and sale of natural gas in an area in Clay County, Missouri, (north and east of Kansas City, Mo.) which for many years has been certificated to it by the Missouri Public Service Commission. Panhandle Eastern Pipe Line Company is its sole source of supply, and it has been a customer of Panhandle since 1936. It receives gas from Panhandle at a delivery point within the city of Liberty, Missouri, and distributes that gas in its service area in Clay County by means of its own distribution system.

By way of formal response for the record to the Application for Temporary Authority recently filed by Panhandle in the above styled proceeding, the Intervenor, Central West Utility Company submits the following:

MOTION TO DISMISS

1. For many years last past Panhandle Eastern Pipe Line Company has failed and refused to improve the Liberty Lateral in order to meet the needs of its existing

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customers dependent thereon, including Central West. Its dereliction in so doing has been established to be unlaw-

fully discriminatory and in violation of the pertinent provisions of the Natural Gas Act by a finding of this Commission dated August 31, 1951, which has become res adjudicata. It now proposes, as it did in its original Application in Docket G-2433, to perpetrate additional discriminatory violations in the form of new and increased facilities for the benefit of other lateral customers without having made or proposed any improvement in the Liberty Lateral. Hence, the necessary finding that Panhandle is willing to conform to the provisions of the Natural Gas Act cannot be made by the Commission, and for that reason this Intervenor respectfully moves that the Application for Temporary Certificate be denied in accordance with the mandatory direction of the Congress contained in Section 7(e) of the Natural Gas Act.

2. In its Application for Temporary Certificate, Panhandle fails to state facts sufficient to show that any emergency exists requiring immediate construction of the proposed facilities, or that such immediate construction is necessary in order "to assure maintenance of adequate service" within the meaning of that phrase as used in the Emergency Proviso attached to Section 7(c). At best, the Application for Temporary Certificate alleges facts sufficient to show that the present and future public

convenience and necessity will in all probability require the proposed improvements, but nothing further than that. Under the provisions of Section 7(c) a certificate of public convenience and necessity will be issued or denied only after full hearing in accordance with the procedure provided in Section 7(e). For this reason the Application for Temporary Certificate should be dismissed and this Intervenor so moves.

3. Panhandle's Application for Temporary Certificate covers the installation of permanent structures to be integrated into its existing system for the rendition of gas service to the public. All of the controversies and issues arising in connection with the installation of such permanent structures are presently involved in a hearing procedure in the orderly course of due process which is not yet completed, and will not be completed prior to time when the permanent installations described in the Application for Temporary Certificate would probably be completed if authorized. The completion of those permanent installations pursuant to such temporary certificate will, as a practical matter, render moot and academic the issues which are the subject matter of the hearings in the principal case, particularly the issue tendered by this Intervenor in Docket G-2433 that the original Application

should be denied and dismissed because of Panhandle's persistent maintenance of discriminations against Intervenor in violation of the Act. Furthermore such completion under a temporary certificate will destroy the effectiveness of the provisions of Section 7(e) of the Act, relating to the conditioning of certificates in accordance with the requirements of public convenience and necessity. The granting of the Application for Temporary Certificate would, for these reasons, be a denial of due process which would be extremely prejudicial to this Intervenor and would be contrary to the Fifth Amendment to the Constitution of the United States, and on that further ground this Intervenor moves that the Application for Temporary Certificate be denied and dismissed.

ANSWER

Except as hereinafter specifically stated, Intervenor is not informed and can not affirm or deny the allegations of fact contained in the Application for Temporary Authority, and asks that on hearing, if any, Panhandle be put on strict proof thereof. Further answering, Intervenor denies specifically the allegations contained in such Application that an emergency exists warranting the issuance of a temporary certificate under the Emergency Proviso in Section 7(c) of the Natural Gas

Act, or that a temporary certificate is required to assure maintenance of adequate service as authorized by such proviso as alleged in such Application.

REQUEST FOR ORAL ARGUMENT AND HEARING

This Intervenor respectfully requests that this matter be set down for oral argument before the Commission on the Motion to Dismiss the Application for Temporary Authority heretofore stated and that, in the event all of such Motions are overruled, that the disputed issues of fact raised in the above Answer, and particularly as to the existence of any emergency or the necessity for immediate construction of permanent facilities under a temporary certificate in order to assure maintenance of adequate service, be set for hearing in accordance with the rules relating to hearings of matters pending before the Commission.

* * * * * * * * * *

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UNITED STATES OF AMERICA

FEDERAL POWER COMMISSION

Before Commissioners: Jerome K. Kuykendall, Chairman; Claude L. Draper, Seaborn L. Digby and William R. Connole.

In the Matters of

PANHANDLE EASTERN PIPE LINE COMPANY	Docket Nos. G-1705, G-1937, G-2433, G-2475, and G-8665
MISSOURI PUBLIC SERVICE COMPANY	Docket No. G-2057
CITY OF MONTGOMERY, MISSOURI	Docket No. G-2932
TOWN GAS COMPANY OF ILLINOIS	Docket No. G-3159
MISSOURI CENTRAL NATURAL GAS COMPANY	Docket No. G-4611
VILLAGE OF WESTVILLE, ILLINOIS	Docket No. G-4666
VILLAGE OF PLEASANT HILL, ILLINOIS	Docket No. G-4940
CITY OF WAVERLY, ILLINOIS	Docket No. G-5139
VILLAGE OF ROSSVILLE, ILLINOIS	Docket No. G-5979
CENTRAL ILLINOIS ELECTRIC & GAS COMPANY	Docket No. G-8428
CITY OF WINCHESTER, ILLINOIS	Docket No. G-8431
VILLAGE OF FRANKLIN, ILLINOIS	Docket No. G-8471
CITY OF HICKMAN, KENTUCKY	Docket No. G-8526
TRUNKLINE GAS COMPANY	Docket No. G-8664
CITY OF MCLEANSBORO, ILLINOIS	Docket No. G-8676
CITY OF VIENNA, ILLINOIS	Docket No. G-8677
CITY OF CLINTON, KENTUCKY	Docket No. G-8771
CITY OF LACENTER, KENTUCKY	Docket No. G-8888
CITY OF BARDWELL, KENTUCKY	Docket No. G-8939
CITY OF WICKLIFFE, KENTUCKY	Docket No. G-8962
LAKE COUNTY UTILITY DISTRICT	Docket No. G-8963

Order Granting in Part and Denying in Part Applications for Temporary Certificate

Panhandle Eastern Pipe Line Company (Panhandle), on August 10, 1955, filed an application for a temporary certificate of public convenience and necessity for authorizations under consideration in Docket Nos. G-2433 and

G-8665, pursuant to Section 7 (c) of the Natural Gas Act and Section 157.17 of the Commission's Regulations, requesting emergency authorization for interim sales of gas and the construction and operation of the natural gas facilities hereinafter described:

(1) Extend the temporary authorization granted December 22, 1954, to cover the sales of gas in increased volumes during the month of November 1955, and also to distribute, as the needs of its customers require, during the month of November 1955, an additional 18,000 Mcf per day resulting from the discontinuance of deliveries to Texas Gas Transmission Corporation;

(2) Issue a temporary certificate for the construction and operation of lateral loop lines to increase capacity to distribute an additional 80,000 Mcf daily along such lateral lines, and for a 16,000 horsepower increase in compressor capacity east of Tuscola, Illinois; and

(3) Issue temporary authorization, providing for the establishment of increased contract demands proposed in the application with delivery thereunder to commence December 1, 1955.

Panhandle states that an emergency exists with respect to the coming winter period, citing unfavorable developments in its Wayerly Storage project and the contract demands which were agreed to in reliance upon that project, the subsequent reduction of those contract demands, and the expansion of Trunkline Gas Company (Trunkline) to meet the resulting deficiency. Panhandle states that unless the Commission grants these requests, the proposed facilities could not be constructed in time to

enable it to receive the increased deliveries which will be available from Trunkline early in December 1955.

Concurrently filed with Panhandle's above-described application for temporary certificate was an application filed by Trunkline for temporary authorization to operate the facilities with which to deliver additional volumes to Panhandle. Temporary authorization for Trunkline to construct said facilities was issued on June 30, 1955. It now appears that Trunkline will be able to commence operation of these facilities by December 1, 1955.

By order issued December 22, 1954, we provided temporary authorization for the operation during the winter of 1954-1955 of part of the facilities for which authorization was sought in Docket No. G-2433. The operation of said facilities made available to Panhandle customers an additional 100,000 Mcf of natural gas per day. As a part of such authorization, we fixed for that winter a distribution of the gas so made available. We made such distribution confident that these proceedings would be completed in time to make a permanent distribution of said gas by the winter 1955-56. A number of intervening factors, principal among which were the operational difficulties encountered by Panhandle in its development of the Waverly Storage Field, have delayed the completion of these proceedings.

In view of the fact that added volumes of natural gas to be made available from Trunkline will not be available until December 1, 1955, it will be necessary to continue the 1954-1955 winter allocation for the month of November 1955, with minor changes. The minor changes are those provided by the Examiner's Decision in Docket Nos. G-1116, *et al.*, issued June 7, 1955, which relate to an allocation of 1,500 Mcf to Northern Indiana Fuel and Light Company, and of 500 Mcf to City of Auburn, Indiana, until

abandonment of service to Texas Gas Transmission Corporation (Texas Gas) and 2,000 Mcf to Northern Indiana Fuel and Light Company, and 1,000 Mcf to the City of Auburn thereafter. As for Panhandle's request that gas be allocated commencing November 1, 1955, contemplating the abandonment to Texas Gas, we have not been advised by Texas Gas that new facilities permitting such abandonment will be completed in time to permit Panhandle's abandonment by November 1, and hence an allocation of the gas made available thereby would be premature at this time.

With respect to the other requests for temporary authorization by Panhandle and by Trunkline, our primary consideration is to make available with the greatest dispatch gas which can be delivered during the coming winter, while at the same time avoiding the foreclosure of issues which may be expected to arise in our final determination in the consolidated proceedings. Important among such remaining issues are (1) the disposition of the 19 proceedings pursuant to Section 7 (a) of the Natural Gas Act by applicants seeking gas from either Panhandle or Trunkline, (2) the elimination of any possible discriminations as to service with respect to Panhandle's policy as to the construction of lateral facilities, (3) the need for a certificate of public convenience and necessity authorizing the construction and the changes in operation of Panhandle facilities through the medium of so-called "operational improvements", and (4) Panhandle's proposal to export some 10,500,000 Mcf of additional natural gas to Canada.

We have been urged by Central West Utility Company (Central West), Michigan Consolidated Gas Company, and the National Coal Association, United Mine Workers

of America, *et al.*, all interveners in these proceedings, to deny the applications for temporary authorizations. We have considered the interests of these interveners as well as the other parties to the proceedings, including the 19 applicants seeking gas from either Panhandle or Trunkline pursuant to Section 7 (a) of the Natural Gas Act, and are convinced that none of their rights will be prejudiced by the temporary authorizations to be issued and conditioned as herein provided. This is particularly the case inasmuch as it has been shown in the record of proceedings that the combined Panhandle-Trunkline main line facilities upon the commencement of operation of the facilities herein authorized will have the ability under our order herein to serve peak day demands estimated by the Section 7 (a) applicants for the next several years, as well as the contract demands which Panhandle proposes to serve plus those contract demands the Commission has heretofore ordered Panhandle to serve and the volumes of natural gas for which Central West has expressed a willingness to contract.

We will therefore provide for a temporary authorization for Trunkline to operate the facilities it has been temporarily authorized to construct and for Panhandle, pending our consideration of the necessity for its obtaining such authorization, to temporarily operate its facilities as herein

provided so as to make use of the additional capacity made available from its "operational improvements". Further, we will provide that, pending the final decision herein, Panhandle's contract demands for the coming winter season, December 1955, through March 1956, shall be those negotiated by Panhandle with certain of its customers, together with those contract demands which have been

fixed for Panhandle by Commission action, all as fully set forth in Column 4 of Appendix A hereto.

In order for Panhandle to make deliveries of contract demand volumes to certain of its customers, it will be necessary for Panhandle to construct additional lateral facilities to such existing customers. There necessarily arises as a result of Panhandle's application for temporary authority to construct and operate these lateral facilities the question of discrimination in service we have found to exist as a result of Panhandle's refusal to construct additional lateral facilities to permit adequate and comparable service to certain of its customers. While we will authorize the temporary construction and operation of the lateral facilities Panhandle seeks, in order to assure adequate service this coming winter to the customers affected thereby, it must be distinctly understood that such authorization is without prejudice to our final order in these proceedings and to any condition we may impose on the final authorization requiring Panhandle to eliminate the discriminations it practices in service to certain customers.

As to Panhandle's request for temporary authorization to construct and operate 16,000 horsepower of additional compressor capacity there has been no showing that all of this capacity is necessary for Panhandle's operations for the coming winter. We, therefore, cannot find to exist any emergency upon which to base a temporary authorization at this time for the entire 16,000 horsepower of additional capacity and will hence deny Panhandle's application in this respect, with the right for Panhandle to show what portion of the 16,000 horsepower is required for this winter.

The Commission *finds:*

(1) An emergency exists and it is necessary and proper in order to assure maintenance of adequate service to Panhandle that Trunkline be granted a temporary certificate for the operation of the facilities as applied for by Trunkline's application of August 10, 1955, and for which temporary authorization for construction was issued on June 30, 1955.

(2) An emergency exists and it is necessary and proper in order to assure maintenance of adequate service to its resale customers that Panhandle be granted a temporary certificate for:

(a) the operation of its facilities so as to permit the delivery of the additional volumes of natural gas made possible by the "operational improvements" on its system.

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(b) the delivery of natural gas for the period November 1, 1955, to November 30, 1955, in accordance with temporary contract demands fixed by our order of December 22, 1955, and amended by our June 7, 1955 order in Docket No. G-1116, *et al.*, all as more fully shown in Column 3 of Appendix A hereto.

(c) the delivery of natural gas for the period December 1, 1955 to March 31, 1956 in accordance with the contracts Panhandle has negotiated with its customers and the contract demands we have fixed for those customers with whom Panhandle has not negotiated contracts all as more fully shown in Column 4 of Appendix A hereto.

(d) the construction and operation of the lateral facilities as described in Panhandle's application for temporary certificate filed August 10, 1955, all as more fully

described in Panhandle's application and amended in hearing.

(3) An emergency does not exist and good cause has not been shown for the granting of the temporary certificate authorizing Panhandle's construction and operation of 16,000 horsepower of additional compressor capacity east of Tuscola, Illinois.

The Commission *orders:*

(A) Pending final Commission decision thereon, a temporary certificate is hereby issued Trunkline for the operation of the facilities for which temporary authorization to construct was issued on June 30, 1955.

(B) Pending final Commission decision thereon, a temporary certificate is hereby issued Panhandle for construction of facilities and for the operation of its facilities as described in Finding (2) above.

(C) Panhandle's application for a temporary certificate authorizing the construction and operation of 16,000 horsepower of additional compressor capacity east of Tuscola, Illinois is hereby denied; provided that Panhandle may make a further showing of the necessity for immediate construction of a part of this additional capacity.

(D) The authorizations granted by Paragraphs (A) and (B) above are without prejudice to final Commission decision herein and shall not be binding upon the Commission in its final determination following full consideration of the record in these proceedings.

(E) Panhandle and Trunkline, prior to the commencement of the construction or of the operations authorized hereunder, shall file with the Commission its acceptance

without condition of this temporary certificate in its entirety, and unless said acceptance be filed within 15 days, this temporary certificate shall be null and void.

(F) A copy of this order and of Panhandle's acceptance thereof as provided by Paragraph (E) above shall be inserted by the Secretary in Panhandle's tariff on file with the Commission, and shall be placed by Panhandle in the posted copy of its tariff in its offices: Provided, however, That this order shall not constitute satisfaction of the provisions of the Commission's Rules and Regulations, Panhandle's Tariff, and the Commission's order of June 7, 1955, that Panhandle shall file appropriate service agreements with respect to the service which it renders.

By the Commission.

LEON M. FUQUAY,
Secretary.

Adopted: October 5, 1955
Issued: October 5, 1955

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APPENDIX A

(Order Issued October, 1955)

PANHANDLE EASTERN PIPE LINE COMPANY

AMENDED CONTRACT DEMANDS UNTIL MARCH 31, 1956

Service, Zone and State	Winter Contract Demands in Mcf		
	In Filed Service Agreements or Prescribed by 3/5/52 Order	Temporary until 11/30/55	Temporary 12/1/55 to 3/31/56
(1)	(2)	(3)	(4)
Main Line			
General Service			
Eastern Zone			
Indiana			
Central Indiana Gas Co.	85,000	95,040	104,000
Greenfield Gas Co.	3,775	4,260	5,500
Indiana Gas Distribution Corp.	4,850	6,625	7,600
Indiana Gas and Water Co.	45,000	48,350	52,500
Citizens Gas and Coke Utility	30,000	36,700	44,000
Kokomo Gas and Fuel Co.	17,000	20,350	23,000
Northern Indiana Pub. Serv. Co.	45,000	46,340	50,000
Ohio Valley Gas Corp.	3,200	4,405	6,000
Richmond Gas Corp.	8,206	8,735	10,000
Ohio			
Ohio Gas Co.	12,200	13,270	15,000
Toledo Edison Co.	3,000	3,67[illegible]	4,700
Michigan			
Battle Creek Gas Co.	15,000	16,340	19,000
Citizens Gas Fuel Co.	4,300	5,305	6,300
Michigan Gas Utilities Co.	11,000	12,340	14,500
Southeastern Michigan Gas Co.	16,200	18,745	19,000
Michigan Gas Storage Co.	60,000	60,000	85,000
Central Zone			
Missouri			
Citizens Gas Co. of Hannibal	10,000	10,670	12,000
Fulton, City of	4,800	5,940	6,500
Gas Service Co.	11,695	11,695	11,695
Missouri Edison Co.	3,500	3,565	3,600

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Service, Zone and State	Winter Contract Demands in Mcf: In Filed Service Agreements or Prescribed by 3/5/52 Order	Temporary until 11/30/55	Temporary 12/1/55 to 3/31/56
(1)	(2)	(3)	(4)
Missouri Power and Light Co.	36,750	38,090	40,091
Missouri Utilities Co.	15,000	16,675	17,500
Missouri Western Gas Co.	2,785	2,995	3,100
Illinois			
Central Illinois Elec. & Gas Co.	6,050	6,420	7,100
Central Illinois Light Co.	99,900	106,665	122,000
Central Illinois Pub. Serv. Co.	37,800	41,285	47,000
Citizens Gas Co.	6,300	8,110	9,000
Illinois Power Co.	67,000	75,700	88,000
Western Zone			
Kansas			
Gas Service Co.	11,979	11,979	11,979
Total General Service	677,284	740,264	845,665
Main Line			
Small General Service			
Eastern Zone			
Indiana			
Indiana Gas Distribution Corp.	1,100	1,100	1,600
Lapel, Town of	600	870	1,000
Montezuma, Town of	600	1,205	1,500
Northern Indiana Fuel and Lt. Co.	—	1,500[1]	4,000[3]
Pendleton Natural Gas Co.	1,600	1,850	1,975
Pittsboro, Town of	350	385	400
Roachdale, Town of	500	567	600
Ohio			
Central States Natural Gas Co.	1,500	1,830	1,999
Dayton Power and Light Co.	750	750	950
Ohio Fuel Gas Co. (Rural)	100	100	100
Central Zone			
Missouri			
Bowling Green Gas Co.	1,999	1,999	1,999
Illinois			
Auburn, City of	—	500[2]	1,000

[1] Upon abandonment of service to Texas Gas Transmission Company — 2,000 Mcf.

[2] Upon abandonment of service to Texas Gas Transmission Company — 1,000 Mcf.

[3] To be sold under General Service Classification.

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Service, Zone and State	Winter Contract Demands in Mcf: In Filed Service Agreements or Prescribed by 3/5/52 Order	Temporary until 11/30/55	Temporary 12/1/55 to 3/31/56
(1)	(2)	(3)	(4)
Morton Municipal Gas Co.	1,975	2,660	3,000[3]
Pittsfield, City of	1,975	2,595	2,900[3]
Roodhouse, City of	1,900	1,900	1,900
Whitehall, City of	1,900	1,900	1,900
Western Zone			
Kansas			
American Gas Co.	1,675	1,675	1,675
Miami Pipe Line Co	1,950	1,950	1,950
Total Small General Service	20,474	25,336	30,398
Main Line			
Limited Service			
East Ohio Gas Co.	85,000	85,000	120,000
Michigan Consolidated Gas Co.	2,000	2,000	2,000
Michigan Consolidated Gas Co.	125,000	125,000	125,000
Ohio Fuel Gas Co.	50,000	50,000	70,000
Texas Gas Transmission Cor.[4]	18,000	17,000	17,000
Total Limited Service	280,000	279,000	334,000
Storage Service			
Michigan Gas Storage Co.	—	—	—
Total Main Line Sales for Resale	977,758	1,044,600	1,210,063
Liberty Lateral			
Central Zone			
Missouri			
Central West Utility Co.	10,000	5,540	5,540
Gas Service Co.	17,375	15,180	15,180
Missouri Power and Light Co.	2,250	2,909	2,909
Kansas			
Louisburg Gas Co.	750	544	544
	30,375	24,173	24,173
Total Sales for Resale	1,008,133		
Firm Direct Sales[5]	1,227	1,227	3,000
Total Sales	1,009,360	1,070,000	1,237,236

[4] Until service is abandoned in accordance with decision in Docket No. G-2101.

[5] Residential and commercial sales north of Texas and Oklahoma. Includes deliveries to Rural Division of Town Gas Company authorized at Docket No. G-6870.

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UNITED STATES OF AMERICA

FEDERAL POWER COMMISSION

In the Matters of

PANHANDLE EASTERN PIPE LINE COMPANY	Docket Nos. G-1705, G-1937, G-2433, G-2475, and G-8665
MISSOURI PUBLIC SERVICE COMPANY	Docket No. G-2057
CITY OF MONTGOMERY, MISSOURI	Docket No. G-2932
TOWN GAS COMPANY OF ILLINOIS	Docket No. G-3159
MISSOURI CENTRAL NATURAL GAS COMPANY	Docket No. G-4611
VILLAGE OF WESTVILLE, ILLINOIS	Docket No. G-4666
VILLAGE OF PLEASANT HILL, ILLINOIS	Docket No. G-4940
CITY OF WAVERLY, ILLINOIS	Docket No. G-5139
VILLAGE OF ROSSVILLE, ILLINOIS	Docket No. G-5979
CENTRAL ILLINOIS ELECTRIC & GAS COMPANY	Docket No. G-8428
CITY OF WINCHESTER, ILLINOIS	Docket No. G-8431
VILLAGE OF FRANKLIN, ILLINOIS	Docket No. G-8471
CITY OF HICKMAN, KENTUCKY	Docket No. G-8526
TRUNKLINE GAS COMPANY	Docket No. G-8664
CITY OF MCLEANSBORO, ILLINOIS	Docket No. G-8676
CITY OF VIENNA, ILLINOIS	Docket No. G-8677
CITY OF CLINTON, KENTUCKY	Docket No. G-8771
CITY OF LACENTER, KENTUCKY	Docket No. G-8888
CITY OF BARDWELL, KENTUCKY	Docket No. G-8939
CITY OF WICKLIFFE, KENTUCKY	Docket No. G-8962
LAKE COUNTY UTILITY DISTRICT	Docket No. G-8963

October 6, 1955

Errata Notice

Please make the following changes in the order granting in part and denying in part applications for temporary certificate, adopted and issued October 5, 1955, in the above entitled matters:

Page 3, eleventh line from bottom of page insert "main line" after the words "Panhandle-Trunkline"

Substitute the attached Sheet 3 for Sheet 3 of the Appendix attached to the order. This will correct typo-

graphical errors appearing in Column 4 under Liberty Lateral as follows:

The figures 12,000, 30,633 and 1,243,696 have been changed to 5,540, 24,173 and 1,237,236, respectively.

The caption of Column 3 of Sheet 3, "Temporary until 11/30/52" has been changed to "Temporary until 11/30/55".

LEON M. FUQUAY
Leon M. Fuquay
Secretary

Memo for Files

Mailed to all parties of record etc.

See service dated 10/5/55

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Service, Zone and State	Winter Contract Demands in Mcf: In Filed Service Agreements or Prescribed by 3/5/52 Order	Temporary until 11/30/55	Temporary 12/1/55 to 3/31/56
(1)	(2)	(3)	(4)
Morton Municipal Gas Co.	1,975	2,660	3,000[3]
Pittsfield, City of	1,975	2,595	2,900[3]
Roodhouse, City of	1,900	1,900	1,900
Whitehall, City of	1,900	1,900	1,900
Western Zone			
Kansas			
American Gas Co.	1,675	1,675	1,675
Miami Pipe Line Co.	1,950	1,950	1,950
Total Small General Service	20,474	25,336	30,398
Main Line			
Limited Service			
East Ohio Gas Co.	85,000	85,000	120,000
Michigan Consolidated Gas Co.	2,000	2,000	2,000
Michigan Consolidated Gas Co.	125,000	125,000	125,000
Ohio Fuel Gas Co.	50,000	50,000	70,000
Texas Gas Transmission Cor.[4]	18,000	17,000	17,000
Total Limited Service	280,000	279,000	334,000
Storage Service			
Michigan Gas Storage Co.	—	—	—
Total Main Line Sales for Resale	977,758	1,044,600	1,210,063
Liberty Lateral			
Central Zone			
Missouri			
Central West Utility Co.	10,000	5,540	12,000
Gas Service Co.	17,375	15,180	15,180
Missouri Power and Light Co.	2,250	2,909	2,909
Kansas			
Louisburg Gas Co.	750	544	544
	30,375	24,173	30,633
Total Sales for Resale	1,008,133		
Firm Direct Sales[5]	1,227	1,227	3,000
Total Sales	1,009,360	1,070,000	1,243,696

[4] Until service is abandoned in accordance with decision in Docket No. G-2101.

[5] Residential and commercial sales north of Texas and Oklahoma. Includes deliveries to Rural Division of Town Gas Company authorized at Docket No. G-6870.

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UNITED STATES OF AMERICA

FEDERAL POWER COMMISSION

In the Matters of

PANHANDLE EASTERN PIPE LINE COMPANY	Docket Nos. G-1705, G-1937, G-2433, G-2475, and G-8665
MISSOURI PUBLIC SERVICE COMPANY	Docket No. G-2057
CITY OF MONTGOMERY, MISSOURI	Docket No. G-2932
TOWN GAS COMPANY OF ILLINOIS	Docket No. G-3159
MISSOURI CENTRAL NATURAL GAS COMPANY	Docket No. G-4611
VILLAGE OF WESTVILLE, ILLINOIS	Docket No. G-4666
VILLAGE OF PLEASANT HILL, ILLINOIS	Docket No. G-4940
CITY OF WAVERLY, ILLINOIS	Docket No. G-5139
VILLAGE OF ROSSVILLE, ILLINOIS	Docket No. G-5979
CENTRAL ILLINOIS ELECTRIC & GAS COMPANY	Docket No. G-8428
CITY OF WINCHESTER, ILLINOIS	Docket No. G-8431
VILLAGE OF FRANKLIN, ILLINOIS	Docket No. G-8471
CITY OF HICKMAN, KENTUCKY	Docket No. G-8526
TRUNKLINE GAS COMPANY	Docket No. G-8664
CITY OF McLEANSBORO, ILLINOIS	Docket No. G-8676
CITY OF VIENNA, ILLINOIS	Docket No. G-8677
CITY OF CLINTON, KENTUCKY	Docket No. G-8771
CITY OF LaCENTER, KENTUCKY	Docket No. G-8888
CITY OF BARDWELL, KENTUCKY	Docket No. G-8939
CITY OF WICKLIFFE, KENTUCKY	Docket No. G-8962
LAKE COUNTY UTILITY DISTRICT	Docket No. G-8963

October 14, 1955

Errata Notice

Please make the following change in the order granting in part and denying in part applications for temporary certificate, adopted and issued October 5, 1955, in the above entitled matters:

Sheet 1 of the Appendix attached to the order, Column (3) opposite Central Indiana Gas Co.:

Change "90,040" to "95,040".

LEON M. FUQUAY,
Secretary

Memo to Files:

Copy of notice sent to all Parties, State Commissions and Persons of record. (See Service dated 10/5/55)

cc: Regional Offices—New York, Chicago, Ft. Worth and Atlanta OGC, Rates, Gas Certs., OCA

ES:lhk 10/17/55

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PANHANDLE EASTERN PIPE LINE COMPANY

120 Broadway
New York, N. Y.

WILLIAM C. KEEFE
Sales Manager

October 27, 1955

Federal Power Commission
441 "G" Street, N. W.
Washington 25, D. C.

Attention: Mr. Leon M. Fuquay
Secretary

Dear Sirs:

We enclose herewith for filing under Section 154.63 of the Commission's Rules and Regulations, two copies of each of forty-one (41) new service agreements between Panhandle Eastern Pipe Line Company ("Panhandle") and certain of its utility customers, all of which are dated October 6, 1955.

The new service agreements cancel and supersede existing service agreements between Panhandle and such customers. Such agreements provide for Winter Contract Demands and Annual Contracted Volumes in accordance

with agreements heretofore entered into by Panhandle and its customers, which were authorized by the Commission in its Order of October 5, 1955, for the period December 1, 1955 through March 31, 1956. The Contract Demands for the months April through October are those contained in Exhibits 27-A and 190 in Dockets Nos. G-1705 et al., except that minor changes were made in certain contract demands for such months at the request of individual customers. No other changes have been made in the service agreements, all of which provide for a term commencing December 1, 1955, and continuing for the unexpired portion of the existing service agreements.

New service agreements under the General Service (G), Small General Service (SG), Limited Service (LS) and Storage Service (S) Rate Schedules of Panhandle's tariff are being filed herewith pursuant to the temporary authorization granted by the Commission's Order of October 5, 1955. Panhandle's application requesting such authorization pointed out that the adverse developments in connection with Waverly Storage Project required renegotiation of contracts with Panhandle's resale customers, so as to reduce the volumes to the capacity which would be available. As further stated in Panhandle's application, the renegotiation of the contracts could not have been accomplished without the substitution of volumes under the Storage Rate Schedules, with respect to Michigan Gas Storage Company and The East Ohio Gas Company, in place of firm gas previously contracted for.

The Commission's Order of October 5, 1955, adopted the contracts Panhandle has negotiated with its customers, as the basis for distribution of gas during the coming winter period. The Commission's Order provides as follows, at Finding 2 (c):

"An emergency exists and it is necessary and proper in order to assure maintenance of adequate service to its resale customers that Panhandle be granted a temporary certificate for:

(c) the delivery of natural gas for the period December 1, 1955 to March 31, 1956 *in accordance with the contracts Panhandle has negotiated with its customers* . . ."

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As shown by the record in Dockets Nos. G-1705 et. al., and as stated in Panhandle's application for temporary authorization, such contracts include the Storage Rate Schedules. It was, however, unnecessary for the Commission to include the volumes to be sold under the Storage Rate Schedules in the tabulation set forth as Appendix A of the Order, because that tabulation concerns only contract demands for firm deliveries of gas. Of course, customers purchasing gas under the Storage Schedules have no right to demand gas under such schedules on any particular day, and therefore specific contract demands applicable to such schedules were properly omitted from the tabulation. Thus, a blank is shown opposite Michigan Gas Storage Company's "winter contract demands" under the S-1 Rate Schedule, even though Michigan Gas Storage Company would, as in the past, receive large volumes of gas during the winter period even under the storage schedule superseded by the one filed herewith. Such volumes have been and will be delivered on winter days when other customers do not use their full contract demands.

The application, to which the Commission's finding quoted above relates, states as follows:

"In addition to the firm gas which Panhandle will have available upon completion of the Trunkline construction, and the construction sought herein, Panhandle will be able to supply Michigan Gas Storage Company and East Ohio

Gas Company with additional volumes of gas under Panhandle's Storage Rate Schedule. *It was essential to the development of a plan of distribution which would fit Panhandle's maximum capacity that East Ohio*

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and Michigan Gas Storage substantially reduce their expected contract demands under firm rate schedules. In view of their ownership of storage facilities, both customers were willing to take as storage sales a portion of the gas for which they had contracted on a firm basis. The resulting annual volumes are shown in the attached tabulation, which is Exhibit 80-A in these proceedings."

"The arrangements reflected in Exhibits 27-A and 80-A, summarized above, and attached hereto, set forth the only equitable basis upon which the volumes of gas which will be available at the beginning of December, 1955, can be distributed."

Exhibit 80-A in Dockets Nos. G-1705 et al., attached to Panhandle's application shows the volumes for East Ohio and Michigan Gas Storage Company, under the S-1 Rate Schedule (lines 13 and 14) in the amounts of 6,000,000 Mcf and 56,000,000 Mcf respectively. Those amounts are taken from Exhibit 190 in those proceedings, setting forth the "contracts Panhandle has negotiated with its customers", adopted by the Commission as its basis for distribution during the temporary winter period. Such contracts with East Ohio and Michigan Gas Storage Company cover both the firm and storage volumes, in the same instrument. The contract with East Ohio recites the difficulty with Waverly storage Project, and states as follows:

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"In view of these developments, we propose as the best possible substitute arrangements under the circumstances, to sell and deliver during such limited period 120,000 Mcf

on a firm basis under our LS-1 Rate Schedule and the balance on an annual basis pursuant to our S-1 Rate Schedule. Accordingly, we hereby agree to enter into two new service agreements with you, the first of which shall be for service under our LS-1 Rate Schedule and shall provide for a daily contract demand of 120,000 Mcf, and the second under our S-1 Rate Schedule, which shall provide for an annual contracted volume of 6,000,000 Mcf."

Similarly, the contract with Michigan Gas Storage Company, also part of Exhibit 190 in Dockets Nos. G-1705 et al., provides:

"In view of these developments, we are willing to purchase part of our requirements on a firm basis under your G-1 Rate Schedule and the balance on an annual basis pursuant to your S-1 Rate Schedule for such period. Accordingly, we hereby agree to enter into two new service agreements with you, the first of which shall be for service under your G-1 Rate Schedule and shall provide for a daily contract demand of 85,000 Mcf during the five winter months, 75,000 Mcf during April to October, and 25,000

Mcf in the remaining five months; the second shall be under your S-1 Rate Schedule and shall provide for an annual contracted volume of 56,000,000 Mcf."

These matters were fully developed on the record in Dockets Nos. G-1705 et al., testimony appearing at various portions of the transcript, including Tr. 5629-5630 and Tr. 7544-7550. In addition, the matter was dealt with once again in Docket No. G-9189, during hearings held on September 14, 1955.

A full explanation of the integral relationship between the necessity for these storage sales and the satisfaction of the minimum firm requirements of Panhandle's other customers who have no storage facilities, was also conveyed

to the Commission in Panhandle's letter of August 29, 1955, in that proceeding. Because of its length, that letter will not be reproduced here, but is incorporated by reference to the Commission's files.

Since Michigan Gas Storage Company and East Ohio, by sacrificing firm gas and agreeing to take storage deliveries, made possible the distribution adopted by the Commission, without a lengthy allocation proceeding, it was only proper that the storage agreements be included in the operations for which temporary authorization was granted in the Commission's Order of October 5. As shown above, the Commission's finding 2 (c) and ordering paragraph (B) achieved that result.

If, however, the failure to set forth such amounts in the Appendix to the Commission's Order poses any problem with respect to the acceptance of the enclosed service agreements, Panhandle hereby requests temporary authorization, as originally requested, for sales of storage

gas to East Ohio and Michigan Gas Storage Company, in the volumes set forth in the enclosed service agreements. The S-1 Rate Schedule which is currently a part of Panhandle's tariff was designed to cover this very problem, and it is the only rate schedule with sufficient priority to assure the contemplated deliveries to these two resale customers.

It is requested that all of the service agreements be made effective December 1, 1955, which is the effective date contemplated by the Temporary Certificate issued by the Commission in its Order of October 5, 1955.

There is attached hereto as Schedule A a comparative statement of billing and revenue data, by months, for the twelve (12) months ending November 30, 1955, and the twelve (12) months ending November 30, 1956, with re-

spect to the customers whose new service agreements are being filed herewith.

A copy of this letter and the related billing and revenue data which is being filed herewith has been sent to all of Panhandle's customers.

Please acknowledge receipt of this letter and the filing made herein.

Yours very truly,

PANHANDLE EASTERN PIPE LINE COMPANY

By WILLIAM C. KEEFE
Sales Manager

WCK:jdg

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UNITED STATES OF AMERICA

FEDERAL POWER COMMISSION

Decision

In the Matters of

PANHANDLE EASTERN PIPE LINE COMPANY	Docket Nos. G-1705, G-1937, G-2433, G-2475, and G-8665
MISSOURI PUBLIC SERVICE COMPANY	Docket No. G-2057
CITY OF MONTGOMERY, MISSOURI	Docket No. G-2932
TOWN GAS COMPANY OF ILLINOIS	Docket No. G-3159
MISSOURI CENTRAL NATURAL GAS COMPANY	Docket No. G-4611
VILLAGE OF WESTVILLE, ILLINOIS	Docket No. G-4666
VILLAGE OF PLEASANT HILL, ILLINOIS	Docket No. G-4940
CITY OF WAVERLY, ILLINOIS	Docket No. G-5139
VILLAGE OF ROSSVILLE, ILLINOIS	Docket No. G-5979
CENTRAL ILLINOIS ELECTRIC & GAS COMPANY	Docket No. G-8428
CITY OF WINCHESTER, ILLINOIS	Docket No. G-8431
VILLAGE OF FRANKLIN, ILLINOIS	Docket No. G-8471
CITY OF HICKMAN, KENTUCKY	Docket No. G-8526
TRUNKLINE GAS COMPANY	Docket No. G-8664
CITY OF MCLEANSBORO, ILLINOIS	Docket No. G-8676
CITY OF VIENNA, ILLINOIS	Docket No. G-8677
CITY OF CLINTON, KENTUCKY	Docket No. G-8771
CITY OF LACENTER, KENTUCKY	Docket No. G-8888
CITY OF BARDWELL, KENTUCKY	Docket No. G-8939
CITY OF WICKLIFFE, KENTUCKY	Docket No. G-8962
LAKE COUNTY UTILITY DISTRICT	Docket No. G-8963

Upon Applications for Certificates of Public Convenience and Necessity, Application for Order Authorizing Exportation of Natural Gas, and Applications for Orders Directing Natural-Gas Company to Establish Connection of Its Transportation Facilities With Facilities of, and Sell Natural Gas to, Persons and Municipalities Authorized to Engage in Local Distribution

HOWELL PURDUE
Presiding Examiner

Filed: March 6, 1956
Issued: March 6, 1956

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PURDUE, PRESIDING EXAMINER: These matters consist of 25 proceedings which were consolidated for hearing. In four of them, Docket Nos. G-1705, G-1937, G-2433 and G-8665, Panhandle Eastern Pipe Line Co. (Panhandle) filed applications for certificates of public convenience and necessity under Section 7(c) of the Natural Gas Act authorizing it to construct and operate certain natural-gas facilities. In one of the proceedings, Docket No. G-2475, Panhandle seeks to secure an order under Section 3 of the Act authorizing it to export natural gas from the United States to the

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Dominion of Canada. In another of the proceedings, Docket No. G-8664, Trunkline Gas Company (Trunkline) seeks a certificate of public convenience and necessity authorizing it to construct and operate certain natural-gas facilities.

The remainder of the proceedings, 19 in number, involve applications of certain companies and communities and a utility district, under Section 7(a) of the Act for orders directing either Panhandle or Trunkline to connect its transportation facilities with facilities which the Section 7(a) applicants propose to construct and to sell natural gas to them. The applicants thus seeking service from Panhandle, and the proceedings instituted by them are as follows: Missouri Public Service Company, Docket No. G-2057; City of Montgomery, Missouri, Docket No. G-2932; Town Gas Company of Illinois, Docket No. G-3159; Missouri Central Natural Gas Compay, Docket No. G-4611; Village of Westville, Illinois, Docket No. G-4666; Village of Pleasant Hill, Illinois, Docket No. G-4940; City of Waverly, Illinois, Docket No. 5139; Village of Rossville, Illinois, Docket No. G-5979; Central Illinois Electric and

Gas Co., Docket No. G-8428; City of Winchester, Illinois, Docket No. G-8431; Village of Franklin, Illinois, Docket No. G-8471. The Section 7(a) applicants seeking service from Trunkline, and the proceedings instituted by them, are as follows: City of Hickman, Kentucky, Docket No. G-8526; City of McLeansboro, Illinois, Docket No. G-8676; City of Vienna, Illinois, Docket No. G-8677; City of Clinton, Kentucky, Docket No. G-8771; City of LaCenter, Kentucky, Docket No. G-8888; City of Bardwell, Kentucky, Docket No. G-8939; City of Wickliffe, Kentucky,

Docket No. G-8962; Lake County [Tennessee] Utility District, Docket No. G-8963.

The matters came on for hearing before the Examiner on January 4, 1955, and concluded on October 10, 1955. The hearing consumed 68 hearing days. The transcript of testimony totalled 9,215 pages. Two hundred sixty exhibits, and 105 items incorporated by reference to other Commission proceedings, were received in evidence.

Panhandle owns and operates a natural-gas pipeline system extending from the Hugoton and Panhandle fields in Texas through Texas, Oklahoma, Kansas, Missouri, Illinois, Indiana, Ohio and Michigan. Trunkline is a subsidiary of Panhandle, the latter corporation owning 96.8% of its common stock. Trunkline owns and operates a natural-gas pipeline system extending from the Rio Grande area of Texas along the Gulf Coast and through Louisiana, Arkansas, Mississippi, Tennessee, Kentucky and Illinois to a point near Tuscola, Illinois, where it connects with the Panhandle system. Trunkline sells and delivers natural gas to Panhandle at Tuscola.

Panhandle's application in Docket No. G-1705 was filed on June 11, 1951. By it, Panhandle requests authorization for the construction and operation of certain com-

pressor units and loop lines, hereinafter particularly described, increasing the maximum-day capacity of the company's main-line system from 550,000 Mcf to 600,000 Mcf. On August 14, 1951, the Commission granted temporary authorization for the construction and operation of such facilities. The facilities were constructed and placed in operation in 1951 and 1952.

* * * * * * * * * *

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In Docket No. G-2433, Panhandle's application filed on May 18, 1954, is for a certificate of convenience and necessity authorizing the construction and operation of facilities of the following several classes, designed to increase its peak-day and deliverability by 455,000 Mcf per day, *i.e.*, from an estimated 970,000 Mcf per day to an estimated 1,425,000 Mcf per day: (1) loop-line facilities, hereinafter particularly described, to effect an increase in Panhandle's daily sales capacity of 100,000 Mcf per day; (2) facilities relating to a storage project known as the

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Waverly storage project, in Illinois, which, in the initial stage, would increase peak-day deliveries by 150,000 Mcf; (3) lateral pipeline facilities to enable Panhandle to deliver additional volumes of gas from its main pipeline to certain of its customers; and (4) main-line compressor facilities to effect an increase in the sales capacity of Panhandle's system of 155,000 Mcf per day. By its action on September 2, 1954, and its order issued December 22, 1954, the Commission granted temporary authorization for the construction and operation of the loop-line facilities constituting class (1) of the G-2433 facilities. The construction was completed and such facilities placed in operation in December 1954.

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At the hearing, Panhandle did not prosecute the portion of its G-2433 application involving the compressor facilities constituting class (4); and near the conclusion of the hearing amended the application so as to eliminate such portion. While the hearing was in progress, in April and May 1955, Panhandle encountered operating difficulties in the development of the Waverly storage project. Accordingly, on May 9, 1955, on Panhandle's motion, the hearing was recessed subject to further order so as to enable Panhandle to formulate substitute plans for meeting the increased requirements of its customers in the ensuing heating season. The hearing was in recess from May 9 to July 12, 1955. Panhandle subsequently amended its application in Docket No. G-2433 by eliminating class (2) of the facilities requested, relative to the Waverly storage project.

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The application in Docket No. G-2433 was further amended, after the reconvening of the hearing, in three respects, *viz*: (1) Panhandle requested authorization for the operation of "repiping facilities" installed in a number of its main-line compressor stations, provided the Commission rules that a certificate is required for the operation of such facilities. Panhandle alleges that these improvements will increase the sales capacity of its main-line system by 45,000 Mcf pay day; and that other "operational improvements," effected by hydrostatic testing, will increase the sales capacity by an additional 35,000 Mcf per day. (2) Panhandle added certain additional lateral lines to the class (3) facilities. (3) Panhandle requested authorization for proposed storage sales to The East Ohio Gas Co. and proposed increased storage sales to Michigan Gas Storage Co., hereinafter particularly referred to.

Panhandle's application in Docket No. G-2475 for au-

thorization to export gas to Canada was filed on July 2, 1954. The authorization sought is pursuant to the terms of a contract dated April 21, 1954, between Panhandle and Union Gas Company, of Canada, Ltd., for the purchase and sale of an annual volume of gas up to 15,500,000 Mcf per year.

The consolidated proceedings from their commencement to the time of the recess comprised the Panhandle matters Docket Nos. G-1705, G-1937, G-2433 and G-2475; and the matters involving the Section 7(a) applicants who seek service from Panhandle. During this period of time, on March 25, 1955, Trunkline filed its application, in Docket No. G-8664, for a certificate of convenience and necessity authorizing it to construct and operate main-line compressor stations, hereinafter particularly described, designed to raise its peak-day capacity by 85,000 Mcf—i.e., from

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290,000 Mcf to 375,000 Mcf; and to sell the additional capacity as hereinatef stated. On the same date, Panhandle filed its application in Docket No. G-8665 for a certificate of convenience and necessity authorizing it to construct and operate certain additional compressor capacity, hereinafter particularly described. This capacity, allegedly, is to permt Panhandle to transport additional volumes in the amount of 80,000 Mcf per day which it proposes to purchase from Trunkline. Between February 8 and May 25, 1955, the applications of the various cities and the utility district seeking service from Trunkline were filed. The Commission, in its order reconvening the hearing on July 12, 1955, consolidated all of the proceedings for the purpose of hearing.

On June 30, 1955, the Commission issued a temporary authorization in Docket No. G-8664 for Trunkline to construct the facilities involved in its application. On Octo-

ber 5, 1955, the Commission adopted an order whereby, pending final Commission decision, (1) a temporary certificate was issued to Trunkline for the operation of said facilities, and (2) a temporary certificate was issued to Panhandle for the construction of facilities and for the operation of its facilities as follows: (a) the operation of its facilities so as to permit the delivery of the additional volumes of natural gas made possible by the "operational improvements" on its system, which had by that date already been effected; (b) the delivery of natural gas for the period November 1, 1955 to November 30, 1955 in accordance with temporary contract demands fixed by its order of December 22, 1954, and amended by its June 7, 1955 order in Docket No. G-1116 *et al;*. (c) the delivery of natural gas for the period

from December 1, 1955 to March 31, 1956 in accordance with contracts Panhandle had negotiated with its customers and contract demands fixed by the Commission for certain customers with whom Panhandle had not negotiated contracts; and (d) the construction and operation of the lateral facilities heretofore referred to as class (3) of the facilities involved in the application in Docket No. G-2433. At the time of the conclusion of the hearing, the Trunkline facilities were in the course of construction, and stood to be completed by December 1, 1955.

The following commissions, cities, counties, companies and organizations intervened in one or more of the aforementioned proceedings and participated in the hearing: Michigan Public Service Commission, Public Service Commission of the State of Missouri, Public Service Commission of Kentucky, the City of Detroit, Michigan, County of Wayne, Michigan, Union Gas Company of Canada, Ltd., Michigan Consolidated Gas Co., Central West Utility Co.,

National Coal Association, United Mine Workers of America, Fuels Research Council, Inc., Anthracite Institute, Michigan Gas Storage Co., The Ohio Fuel Gas Co., The Gas Service Co., The East Ohio Gas Co. (East Ohio), Citizens gas Fuel Co., Central Illinois Light Co., Illinois Power Co., Central Illinois Public Service Co., and Kokomo Gas and Fuel Co. Most of the Section 7(a) applicants intervened either in the consolidated proceedings, or else in Docket No. G-2433 or in Docket No. G-8664, requesting substantially the same relief as they requested in their Section 7(a) applications. Panhandle intervened in a number of the Section 7(a) proceedings wherein service is sought from Trunkline.

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At the hearing, evidence both oral and documentary was introduced by Panhandle; by Trunkline; by the Section 7(a) applicants; by intervenors Union Gas Company of Canada, Ltd. (Union), Central West Utility Co. (Central West) and Michigan Consolidated Gas Co. (Michigan Consolidated); and by the intervenor coal and railroad interests, namely, National Coal Association, United Mine Workers of America, Fuels Research Council, Inc., and Anthracite Institute (hereinafter referred to as the "coal interests"). Cross-examination of witnesses was conducted by the applicants, intervenors and the staff of the Commission. The applicants, Union, Central West, Michigan Consolidated, the coal interests, the City of Detroit, County of Wayne, the Michigan Public Service Commission, East Ohio and the Staff filed briefs after the conclusion of the hearing; and the proceedings were submitted for consideration and decision.

DOCKET No. G-1705

The facilities of which Panhandle seeks permanent certification in Docket No. G-1705 are as follows:

Three compressor units, totaling 6,000 horsepower, and 32 miles of loop pipeline, costing $3,222,638.

These facilities were financed from a portion of the proceeds from $20,000,000 in debentures issued by Panhandle in July 1951. It will be hereinafter shown, by the treatment of "Gas Supply" under the heading, "Docket No. G-2433," that Panhandle's gas supply is adequate to justify the permanent certification of these facilities.

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Since the installation of the facilities in 1951 and 1952, the volume of gas related to the increased capacity resulting from them has been, and will continue to be, required to meet the demands of Panhandle's customers.

DOCKET No. G-2433

Facilities Involved

The facilities involved in the authorization sought by Panhandle in Docket No. G-2433 are as follows:

(1) Twelve sections of main pipeline loops, totaling 294.6 miles, costing about $23,096,219.

(2) Ten separate lateral loop facilities designated and having an approximate cost as follows: Peoria [Illinois] Lateral, including 3 river crossings, $2,640,920; Clinton [Illinois] Lateral, $128,750; Anderson [Indiana] Lateral and Measuring and Regulating Station, $335,420; Fort Wayne [Indiana] Lateral, $171,289; Kokomo-Tipton [Indiana] Lateral, $105,060; Greenfield [Indiana] Lateral, $87,550; Winchester [Indiana] Lateral, $63,860; Arthur [Illinois] Lateral $61,491; Villa Grove [Illinois] Lateral, $46,556; Michigan-West [Michigan] Lateral, $834,000; total cost, $4,474,896.

(3) "Repiping facilities" in a number of main-line compressor stations, to permit operation of Panhandle's sys-

tem as three separate lines, costing $1,741,300. As previously stated, Panhandle requests a certificate covering these facilities only provided the Commission determines that such facilities are within the purview of Section 7(c) of the Act.

It has been noted that the facilities described in paragraphs (1), and (2) have been, or are being, constructed pursuant to temporary authorization.

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Authorization Sought for Increased Sales

In addition to seeking certification of the installation and operation of facilities, Panhandle, in Docket No. G-2433, seeks authorization to make increased sales to most of its customers. The increased sales consist, first, of sales embodying increased contract demands which Panhandle has negotiated with numerous of its customers; and,

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second, of storage sales to The East Ohio Gas Co. and increased storage sales to Michigan Gas Storage Co. (Gas Storage). The sales to the latter two customers were the subject of an amendment to Panhandle's application, heretofore mentioned. They are made under Panhandle's S-1 Rate Schedule, and are in annual contracted volumes as follows: East Ohio, 6,000,000 Mcf; Gas Storage, an increase from 42,605,000 Mcf to 56,000,000 Mcf.

By order issued October 5, 1955 in these proceedings, the Commission granted a temporary certificate to Panhandle authorizing the delivery of natural gas, pending the final decision, herein, in accordance with the contract demands which Panhandle had negotiated with numerous customers and certain contract demands which the Commission had fixed for other customers with whom Panhandle had not negotiated contracts. Subsequent to the

conclusion of the hearing, the Commission, by order issued November 29, 1955 in these proceedings, granted a temporary certificate to Panhandle for the operation of its facilities so as to deliver the aforementioned annual contracted volumes of gas to East Ohio and Gas Storage, pursuant to the S-1 Rate Schedule, pending final decision herein.

The Staff recommends that Panhandle be authorized to increase its firm contract demands as proposed. As already stated, there is a market for the volumes of gas represented by the contract demands.

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A continuation of the storage sales to East Ohio and Gas Storage, likewise, appears to be warranted. The Staff questions the sufficiency of the evidence to show a need for the gas on the systems of these two customer companies, and suggests that authorization of these sales be denied pending submission by Panhandle or Trunkline of evidence of increased gas supplies. The Examiner considers the evidence to be sufficient to grant the authorization. The fact that East Ohio and Gas Storage have contracted to purchase the annual volumes of 6,000,000 Mcf and 56,000,000 Mcf, respectively, is some evidence that there is a market and need for the gas on their systems. Moreover, East Ohio's need for the increased quantities of gas is demonstrated by its having built a pipeline to receive the deliveries at a cost of $10,000,000. Gas Storage's need is similarly demonstrated by Panhandle's having constructed, under temporary authorization, the Michigan West Lateral, at a cost of $834,000, on which lateral Gas Storage is the principal customer.

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Question of Discrimination in Service on Part of Panhandle

An important issue presented in Docket No. G-2433 is whether or not Panhandle is practicing unlawful discrimination in the service it provides to certain of its utility customers, as distinguished from the service which it provides, and proposes to provide under the certificate sought in such proceeding, to others of its utility customers. The customers in the first category are served from a lateral on Panhandle's system termed the "Liberty Lateral." Those in the second category are served from the 10 laterals on such system which Panhandle seeks authorization to enlarge and to operate as enlarged.

Intervenor The Central West Utility Co. (Central West) and staff counsel, relying upon findings made by the Commission in 1951 in a previous proceeding, *In re Panhandle Eastern Pipe Line Co.*, 10 F.P.C. 328, 339, contend that Panhandle for a long time past has practiced unlawful discrimination against customers whom it serves from the Liberty Lateral. They assert that such discrimination consists in not having afforded those customers equal service to that which Panhandle afforded those customers equal service to that which Panhandle afforded customers served from two of its laterals, called the Maumee and Adrian laterals. Central West requests that the Examiner so find and conclude in the instant proceedings. "In administrative law no firm rule concerning *res judicata* has yet been established, either affirmative or negative." Parker, *Administrative*

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Law (1952), p. 247. In view of the uncertain state of the law, the Examiner will not consider himself as being con-

trolled by the findings in the previous case; and will be governed solely by the evidence adduced in the instant proceedings. The proposed findings and conclusions submitted by Central West respecting claimed discrimination involving the Liberty Lateral on the one hand and the Maumee and Adrian laterals on the other hand are rejected.

Central West and Staff further charge unlawful discrimination by Panhandle against Central West, whom it serves off of the Liberty Lateral, as opposed to customers served from the 10 other lateral lines. The evidence shows that Central West is engaged, *inter alia*, in the business of supplying natural-gas service in a portion of Clay County, Missouri, within the Kansas City, Missouri, metropolitan area. Its service in Missouri includes Liberty, Avondale, and an unincorporated area commencing a short distance northeast of Liberty and extending westward to the Missouri-Kansas state line and southward to the northerly boundary of Kansas City. Panhandle has been Central West's sole source of supply for this area since 1942.

The Liberty Lateral, 66 miles in length, commences at the Louisburg Compressor Station, on Panhandle's main pipeline system near the Kansas-Missouri state line, and extends thence in a general northeasterly direction to a point a short distance north of Liberty. More particularly, the lateral first extends from the compressor

station in a north-northeasterly direction for a distance of some 30 miles. It then takes a jog in a general easterly direction for a distance of some 12½ miles to a point known as Unity Farm. Thence it continues in a north-northeasterly direction to its terminus at the point beyond Liberty.

Panhandle supplies gas from this lateral to three other utility customers and to three industrial customers. The

three other utility customers are The Louisburg Gas Co. (Louisburg Co.), Gas Service Co. (Gas Service), and Missouri Power & Light Co. The points of delivery to the four utility customers are as follows: (1) to the Louisburg Co., a point on the lateral near Louisburg Compressor Station; (2) to Gas Service, certain points on the lateral between the point of delivery to the Louisburg Co. and Unity Farm; (3) to Central West, a point on the lateral at Liberty; and (4) to Missouri Power & Light, a point on the lateral at or near Liberty. In terms of quantities of gas received, Gas Service is the principal one of the four utility customers. A portion of its service area, supplied in part from the Liberty Lateral, lies generally along the lateral in Jackson County. Gas Service is a long-standing customer of Panhandle. Missouri Power & Light serves Excelsior Springs, Missouri.

In addition to Panhandle, Cities Service Gas Co. (Cities Service) delivers gas into the Liberty Lateral. Cities Service's deliveries are made to Panhandle at a connection to the lateral a

short distance west of Unity Farm. The deliveries are made under an exchange agreement between the two companies whereby Panhandle, in return, delivers gas to Cities Service at a connection with the Cities Service system elsewhere in Missouri.

The capacity of the Liberty Lateral, and the approximate maximum volume of gas therefrom available to the respective utility customers, is demonstrated by the performance of the lateral on its historic peak day, January 20, 1954. On that date, Panhandle's input at Louisburg was 16,311 Mcf, and Cities Service's input was 9,164 Mcf, making a total input of 25,475 Mcf. This volume was distributed as follows: Louisburg Co., 501 Mcf; Gas Service, 15,965 Mcf; Central West, 5,249 Mcf; Missouri

Power & Light, 2,892 Mcf; industrial sales and right-of-way customers, 524 Mcf; lost and unaccounted for, 344 Mcf. It will be seen that the total volume of gas available to the four utility customers was 24,607 Mcf.

An Examiner's decision, *In re Panhandle Eastern Pipe Line Co.*, Docket No. G-1116, issued April 19, 1955, *inter alia* prescribed service rules for the Liberty Lateral. It was found that on January 21, 1954, Panhandle delivered the following volumes to said respective utility customers: Louisburg Co., 544 Mcf; Gas Service, 15,180 Mcf; Central West, 5,540 Mcf; Missouri Power & Light, 2,909 Mcf—a total of 24,173 Mcf. In such decision, the following conclusion was reached: "* * * equity compels us to continue these volumes as peak-day volumes

for each of the three major customers on the Liberty Lateral until larger facilities are constructed * * *." By order issued on June 7, 1955 in such proceeding, the Commission affirmed the Examiner's decision in the foregoing respects; and fixed Panhandle's obligation to deliver gas to said customers in such volumes, except that the obligation respecting the Louisburg Co. was fixed at 550 Mcf.

The record shows that the requirements of the four utility customers served by the Liberty Lateral are far in excess of these volumes. Their estimated peak-day requirements for the winter of 1954-55 totalled 31,517 Mcf. Central West's estimate of the demand which it will require, and for which it is willing to contract for the period beginning November 1, 1955, is 12,000 Mcf. Gas Service estimates its peak-day requirements for the winter of 1955-56 to be 21,838 Mcf; and Missouri Power & Light estimates its peak-day requirements for the same period to be 3,902 Mcf. There is no evidence as to the Louisburg Co.'s estimate of its peak-day requirements for this period, but it is to be inferred that they are at least equal

to its present contract demand, which is 550 Mcf. The total of these requirements is 38,290 Mcf. Thus, the deficiency in the present quantity of gas available to the four utility customers, 24,607 Mcf, on the basis of the estimated requirements of these customers in the winter of 1955-56 is 13,683 Mcf.

The utility customers served by the 10 lateral lines which Panhandle, in Docket No. G-2433, seeks authorization to enlarge and

to operate as enlarged, are as follows:

Peoria Lateral	Central Illinois Light Co.
	Illinois Power Co.
	Central Illinois Electric and Gas Co.
	Central Illinois Public Service Co.
	Morton Municipal Gas Co.
Clinton Lateral	Illinois Power Co.
Anderson Lateral	Central Indiana Gas Co.
Fort Wayne Lateral	Northern Indiana Public Service Co
Kokomo-Tipton Lateral	Kokomo Gas and Fuel Co.
	Indiana Gas & Water Co., Inc.
Greenfield Lateral	Greenfield Gas Co., Inc.
Winchester Lateral	Ohio Valley Gas Corp.
Arthur Lateral	Citizens Gas Co.
Villa Grove Lateral	Citizens Gas Co.
Michigan West Lateral	Michigan Gas Storage Co.
	Southeastern Michigan Gas Co.
	Michigan Gas Utilities Co.
	Battle Creek Gas Co.

On January 8, 1954, Panhandle addressed a letter to all of these utility customers, except Michigan Gas Storage Co. (Gas Storage). In the letter, Panhandle stated that it "proposed to enter into agreements" with them "for additional deliveries of gas commencing November 1, 1955"; and that "if you are interested in purchasing additional quantities of gas from us, please indicate the quantities you wish to purchase as of that date." In due course, all of the foregoing utility customers to whom the letter was

addressed responded, setting out increased contract demands which they stated they would require and for which they

would be willing to contract. In each instance, Panhandle agreed to sell to the customer the increased volumes of gas requested. In June 1954, Panhandle entered into a new contract with Gas Storage which provided for an increase in the contract demand.

On May 18, 1954, Panhandle filed its application in Docket No. G-2433 wherein, as subsequently amended in the light of the Gas Storage contract, it requested authorization for "the construction and operation of additional lateral pipeline facilities which will enable Panhandle" "to augment its deliveries" to all of the customers served off of the 10 lateral lines above set out. In 1955, due to the deferment of the Waverly storage project and an attendant lesser supply of gas than had been anticipated, Panhandle and certain of said customers entered into new agreements of purchase and sale providing for lesser contract demands than contained in the 1954 agreement, but which demands were still in excess of those which had obtained prior to 1954.

Panhandle did not send the January 8, 1954 letter to either Central West or Gas Service; and did not otherwise give said utility customers or either of them an opportunity to contract for additional quantities of gas. Specifically with reference to Central West, Panhandle has at all times since the summer of 1951 refused to enter into a service agreement with that company for the sale of increased contract demands, despite repeated requests on the part of Central West for Panhandle to do so. With reference to Gas Service, the record shows

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that on, and at all times since, January 8, 1954, at least, Panhandle was, and now is, unwilling to supply any of Gas Service's increased requirements in the area served by the Liberty Lateral; and is unwilling to enter into a service agreement with Gas Service for the sale from the lateral of increased contract demands. Furthermore, Panhandle has at all times since the summer of 1951 failed and refused to construct additional lateral pipeline facilities so as to make it possible to augment its deliveries to the customers served by the Liberty Lateral or any of them; and has failed and refused to take any steps to the end of effectuating an enlargement or improvement of the capacity of such lateral.

The evidence shows that in the area served by Central West, there is a demand and need for increased deliveries of gas from Panhandle; and that such deliveries are required by the public convenience and necessity. The area is having and, by official forecasts, will continue to have, a rapid population growth. According to an analyst for the Kansas City Plan Commission, the area is "highly desirable" for residential development, and such development has been "spectacular" in recent years. Substantial housing developments and shopping centers are now under way or are proposed for the immediate future. Natural gas is the preferred fuel in these developments.

It also appears from the evidence that the Central West certificated area has a high industrial potential, due to its proximity to Kansas City, the presence in the area of desirable industrial sites, and the availability of adequate railroad transportation, electric

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power and water resources, and an adequate labor supply. According to the expert testimony, natural gas would

be a stimulus to both residential and industrial development.

As to Gas Service, its estimates of its requirements submitted to Panhandle show that it has a need for substantially increased deliveries of gas from Panhandle. The portion of its service area the supply for which is obtained in part from Panhandle is growing very rapidly.

The conditions and circumstances pertaining to the laterals included in Panhandle's enlargement program, on the one hand, and to the Liberty Lateral, on the other hand, are such that the differentiation in treatment to which Central West and Gas Service have been and are subjected is not warranted. This conclusion is justified by the facts recited above together with additional evidence referred to below.

Thus, in December 1953, in response to Panhandle's request, most of the customer companies on the 11 laterals in question supplied Panhandle with information as to their gas requirements, actual for the year 1953 and estimated for the years 1954-57, inclusive. From the information so supplied, the following tabulation is made:

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COMPARATIVE CHARACTERISTICS THROUGH FIVE-YEAR PERIOD 1953-1957 OF MARKETS SERVED FROM LIBERTY LATERAL AND LATERALS INCLUDED IN PANHANDLE ENLARGEMENT PROGRAM

Lateral	Number of Customers	Percents of Incremental Increases, 1953-1957	
		Annual Gas Requirements	Peak-Day Gas Requirements
(1) Liberty (Louisburg Gas Co. Not Included)	84%	75%	68%
(2) Peoria-Clinton[1]	12%	42%	68%
(3) Anderson (Not Shown)	—	—	—
(4) Fort Wayne	9%	41%	43%
(5) Kokomo-Tipton	22%	50%	71%
(6) Greenfield	18%	21%	24%
(7) Winchester	6%	52%	41%
(8) Arthur	17%	24%	32%
(9) Villa Grove	10%	17%	17%
(10) Michigan West (Michigan Gas Storage Co. Not Included)	19%	3%	44%
Totals Exclusive of Liberty	12%	44%	61%

[1] Considered by Panhandle to be two separate laterals, but treated here as one in the interest of simplicity.

It will be seen that in percentage of increase in number of customers and annual gas requirements, the estimates of the utility companies on the Liberty Lateral far exceed, and in percentage of increase in peak-day requirements, exceed, the estimates of the companies on the laterals included in the enlargement program.

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Furthermore, the cost per Mcf of installation which will enable Panhandle to increase the capacity of the Liberty Lateral sufficiently to satisfy the requirements in the near future is less than the cost of the improvements to the other 10 laterals. The evidence shows that a prudent and proper method of increasing the capacity of the Liberty Lateral consists in installing (1) a new 10-inch line commencing at a connection with Panhandle's main pipeline

system at a point due south of Unity Farm and extending thence for a distance of 19 miles to Unity Farm, where it will tie into the existing line; and (2) a 4.8-mile ten-inch loop line near Liberty. Thereby the capacity of the Liberty Lateral will be increased by 22,189 Mcf. The reasonably-estimated cost of these installation sis $619,000. Hence, the cost per Mcf of increased capacity will be $27.90. The average cost per Mcf of the increased capacity of the 10 other laterals is $35.27. The cost per Mcf of the Peoria and Clinton laterals, which represents 62% of the cost of all 10 of the laterals, is $44.55.

It is true that the 22,189 Mcf increase in capacity of the Liberty Lateral will result in 8,506 Mcf of capacity over that needed to meet the estimated requirements in the winter of 1955-56. But an 8-inch line to Unity Farm would be uneconomical. And in any event the entire increase in capacity will be needed, according to the market estimates, within the ensuing two year period.

The enlargement program in the cases of 7 of the 10 other laterals involves only looping. But in the case of each of the

remaining 3 laterals—Anderson, Arthur and Villa Grove—the program involves the laying of a new line, as does the Liberty Lateral improvement. The looping, in the instances of the 7 laterals, is only to the approximate extent of the demands for the winter of 1955-56. But in the instances of the 3 laterals where new lines are laid, there will be excess capacity. In this connection, Panhandle's engineer testified, "On a new lateral it is very hard to design for a particular volume." The proposed construction which would result in the excess capacity on the Liberty Lateral over the demands in the winter of 1955-56 is but the equivalent of Panhandle's program, under similar circumstances, for increasing the capacity of the other laterals.

An official of Panhandle who has general supervision of the operation of its transmission system testified that it would be uneconomical for Panhandle to increase the capacity of the lateral so as to be enabled to supply Central West with increased volumes of gas. As ground for his statement, he made the averment that Central West has "no industrial load"; its load is "purely residential and domestic." The witness submitted no studies to support his claim that the undertaking would be uneconomical. Moreover, it has been seen that the Central West area has good industrial potentialities. And the industrial potential of an area is a factor which Panhandle takes into account in determining whether enlargement of a lateral serving the area is justified.

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The testimony of the Panhandle official is to be further discounted in view of still other evidence in the record. Such evidence leads to the conclusion that the present lack of an industrial load in the Central West area is not Panhandle's real reason for refusing increased service to Central West. In the first place, Panhandle has on a number of occasions in past years refused to sell gas to Central West for industrial and other interruptible loads. The prospective industrial customers included Ford Motor Co., which in 1951 constructed a manufacturing plant in Central West's service area. This customer was lost by Central West to Gas Service because Central West could not obtain the necessary gas from Panhandle.

In the second place, the evidence justifies the inference, and the Examiner finds, that the real cause of Panhandle's failure to increase its deliveries to Central West is a dislike on its part to supply increased quantities of gas to Gas Service. It has been seen that the points at which Gas Service takes gas off the Liberty Lateral are upstream from the point at which Central West takes gas. The

record reveals that one reason for Panhandle's refusal to increase the Central West deliveries is a belief on its part that it would not be able to help Central West's situation without also being in a position to serve more gas to Gas Service. And a vice president of Panhandle testified that the company's argument was "in effect not with Central West but with Gas Service Co."

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The Examiner finds and concludes that Panhandle, in violation of Section 4(b) of the Act, by its acts and conduct as above found, has granted and is granting an undue preference and advantage to the companies above specified served by the 10 laterals involved in its enlargement program, and to each of said companies; (2) has subjected and is subjecting Central West and Gas Service to undue prejudice and disadvantage; and (3) will, unless prevented, maintain an unreasonable difference in service and facilities as between the localities served by the 10 laterals above specified, on the one hand, and the Liberty Lateral, on the other hand. The Examiner further finds and concludes that such acts and conduct on the part of Panhandle constituted and constitute an unlawful discrimination in service among customers. It may be that Panhandle is also subjecting Missouri Power & Light to undue prejudice and disadvantage, but the evidence is insufficient to warrant a finding in this respect.

In its order issued November 2, 1954 consolidating proceedings for hearing, the Commission recited that "our general consideration of the lateral policy of Panhandle * * * of necessity is involved in Panhandle's application at Docket No. G-2433 * * *." In its order of October 5, 1955 issuing a temporary certificate for the construction and operation of the facilities by which the enlargement of the 10 lateral lines was to be effected, the Commission

specified that the authorization was "without prejudice to our final order in these

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proceedings and to any condition we may impose on the final authorization requiring Panhandle to eliminate the discriminations it practices in service to certain customers."

In issuing a final certificate of convenience and necessity to Panhandle covering the facilities to increase the capacity of the 10 lateral pipelines, the Commission possesses the power and authority to prescribe conditions designed to eliminate and prevent the undue preference and prejudice, and the unreasonable difference in service and facilities. Specifically, it possesses the power and authority to grant the authorization which Panhandle seeks only upon condition that Panhandle afford increased volumes of gas to meet the requirements of customers on the Liberty Lateral, and that Panhandle increase the capacity of that lateral.

Section 7(e) of the Act provides that,

"The Commission shall have the power to attach to the issuance of the certificate and to the exercise of the rights granted thereunder such reasonable terms and conditions as the public convenience and necessity may require."

The above-quoted phrase "public convenience and necessity" is to be given a scope consistent with the purpose of the Natural Gas Act. *Cf. Interstate Commerce Commission* v. *Railway Labor Executives Ass'n*, 315 U. S. 373, 376-77. The purpose of the Act was to provide "an agency for regulating the wholesale distribution to public service

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companies of natural gas moving interstate." *Illinois Natural Gas Co.* v. *Public Service Co.*, 314 U. S. 489, 506;

Federal Power Commission v. *Hope Natural Gas Co.*, 320 U. S. 591, 609. It has been seen that the regulation provided for included the prohibition of undue preference and prejudice and unreasonable difference in service and facilities. The effect of the lateral facilities for which Panhandle seeks authorization is to be considered in a much broader sphere than the immediate localities and populations to be served by such facilities. *Cf. Interstate Commerce Commission* v. *Railway Labor Executives Ass'n, supra*, at p. 377.

In re Northern Natural Gas Co., Opinion No. 268, is an applicable precedent consistent with these views of the law: There, Northern sought authorization to construct and operate certain additions to its main-line facilities, and certain lateral lines to serve particular adjacent communities. The Commission, in issuing a certificate, imposed a condition that Northern construct lateral lines to serve numerous specified communities, including a number of lines other than those which Northern had sought to have certificated, and which would extend to communities other than those which Northern had proposed to serve.

The reasonableness of a condition requiring Panhandle to increase the capacity of the Liberty is apparent when compared with conditions prescribed by the Interstate Commerce Commission under the Interstate Commerce Act. See, *e.g.*, *Interstate Commerce Commission* v. *Railway Labor Executives Ass'n, supra* (holding that in a certificate

authorizing railroad abandonments, the Commission has authority to attach terms and conditions for the benefit of employees displaced by the abandonments); *United States* v. *Lowden*, 308 U. S. 225 (holding that in an order authorizing a consolidation the Commission has authority to impose conditions for the benefit of employees adversely affected by the consolidation); *United Railways Co. Con-*

struction, 247 I.C.C. 665, 669 (imposing in a certificate authorizing the construction of lines, a condition that applicants tender railroad companies operating connecting lines 10-year options under which the latter might acquire control of the applicants or their properties).

Panhandle Eastern Pipe Line Co. v. *Federal Power Commission* (C.A. 3), 204 F. 2d 675, cited by Panhandle, is not applicable here. That case was not a certificate proceeding, but an allocation proceeding under Section 5(a) of the Act. There, the Commission directed Panhandle to eliminate discrimination by increasing the capacity of its Liberty Lateral. The Court of Appeals held that the Act did not empower the Commission, for the purpose of eliminating the discrimination, to require the company involuntarily to enlarge its facilities; that the question whether to employ additional capital in the enlargement of its pipeline facilities was to be left to the judgment of the company's stockholders and directors. Here, the order will not require Panhandle to enlarge the Liberty Lateral, but authorization of the enlargement of the other laterals will be conditioned upon the company enlarging such

lateral. Any construction that Panhandle has undertaken under the temporary authorization has been, and any future construction that it undertakes will be, at its own volition. The certificate issued is wholly permissive and in no sense mandatory; it merely withholds the authorization which Panhandle seeks unless the company affords non-discriminatory service. As said in *Panhandle Eastern Pipe Line Co., Central West Utility Co. et al.*, Docket Nos. G-1116, G-1616 *et al., supra* (Exmr.'s Dec. issued April 19, 1955, p. 13, affirmed by Commission):

"* * * this Commission cannot in these proceedings compel the construction of additional facilities by Panhandle.

Whether the construction of such facilities should be made a condition of a certificate for other facilities, now or hereafter sought voluntarily by Panhandle, is another question."

Authority to deny a certificate unless Panhandle acts to eliminate the discrimination is contained in still another provision of Section 7(e). This provision is that before a certificate may issue it must be "found that the applicant is.* * * willing properly to do the acts and to perform the service proposed and to conform to the provisions of the Act * * *." The staff brief correctly states that "unless Panhandle acts to eliminate the existent discrimination, it cannot be found that it is willing to conform to the provisions of the Act, and * * * the certificate must be denied."

As a condition of the authorization hereinafter granted in Docket No. G-2433, the Examiner will require that Panhandle afford Central West a contract demand of 12,000 Mcf, and that Panhandle make

this quantity of gas available to Central West at Panhandle's existing delivery point to that company. No condition that Panhandle make increased volumes of gas available to Gas Service over the volume obligations heretofore fixed by the Commission will be imposed; since there is no evidence as to the demand for which Gas Service is willing to contract.

DOCKET No. G-8664

The facilities of which Trunkline seeks permanent certification in Docket No. G-8664 are as follows:

Eight main-line compressor stations, totaling 56,700 horsepower, and 24.36 miles of loop pipeline, costing about $17,686,000.

Upon completion of the facilities, the designed capacity of the Trunkline system will be 375,000 Mcf per day, an increase of 85,000 Mcf over present capacity.

It has been seen that at the time the hearing concluded, these facilities were being constructed under temporary authorization.

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DOCKET No. G-2475

It has been observed that Panhandle, in Docket No. G-2475, seeks authorization, under Section 3 of the Act, to export natural gas to Canada, pursuant to a contract dated April 21, 1954 between Panhandle and Union Gas Co. of Canada (Union). The contract is for a term of 20 years from the date of first delivery of gas thereunder. It provides for the sale by Panhandle to Union of volumes of gas as follows: during the first five years, annual volumes increasing progressively from a total of 10,500,000 Mcf to a total of 14,500,000 Mcf, there being a yearly increase of 1,000,000 Mcf; during the remaining 15 years, total annual volumes of 15,500,000 Mcf. The price of gas is 35¢ per Mcf, or 120% of the General Service rates fixed by the Commission for Panhandle in Michigan, whichever is higher. Approximately two-thirds of the respective annual volumes would be delivered during the seven summer months; and the remainder, during

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the five winter months. Of these amounts, Panhandle would be obligated to deliver the following percentages: during the summer months, not less than 92% of the scheduled volumes; during the winter months, not less than 88% of the scheduled volumes; on an annual basis, at least 90% of the annual volumes. The contract is to be

terminated in the event equivalent volumes of gas become available to Union from a pipeline which may be constructed by Trans-Canada Pipe Lines, Ltd.

Union says in its brief:

"The natural gas proposed to be exported by Panhandle will be utilized in connection with Union's storage program and will be resold for domestic, commercial and industrial processing uses in various communities in southwestern Ontario. The principal purpose of the project is to make natural gas available in the Hamilton, Ontario, market."

This statement is supported by the evidence, and is adopted as a finding. No boiler-fuel sales would be made with such gas.

In 1946, *In re Panhandle Eastern Pipe Line Co.*, Docket No. G-612, 5 F.P.C. 472, the Commission authorized Panhandle to export natural gas to Union to the extent of 5,500,000 Mcf annually during the seven summer months. The order in that proceeding, which is still in force and effect, contains the following condition (*Id.*, at p. 475):

"(E) * * * Deliveries of natural gas to Union shall be curtailed or interrupted whenever, and to the extent, required for the protection of deliveries of natural gas, either for immediate consumption or for storage, to any and all of applicant's customers in the United States. The authorization hereby granted shall not constitute ground or justification for any refusal by applicant to transport or sell natural gas to any person or municipality

at any time during the term hereof, either for consumption in the United States by such person or municipality or for storage, or for resale for ultimate public consumption in the United States for domestic, commercial, industrial, or

any other use, it being the intent of this authorization that at all times, persons and municipalities in the United States are to receive preferential service over that to Union."

If the Commission's policy thus expressed remains the same today, then the inquiry in Docket No. G-2475 is at an end. For, as stated in Union's brief:

"It is obvious from the testimony of Union's policy witness, Mr. Weir, that the inclusion by the Commission in its order in the current proceeding of any limitation such as that contained in paragraph E of the G-612 order would make the project unfinancible and hence would be unacceptable to Union."

Whether or not the Commission will here follow the policy adopted in the G-612 order is for the Commission alone to say. But for the purpose of the ensuing treatment, the Examiner assumes that the Commission will not do so.

The Examiner is of the view that the application should be denied for a variety of reasons. In the first place, authorization to export the gas should not be granted because of the shortage in Trunkline's gas supply. Manifestly, the large volume of gas which Panhandle receives from Trunkline is an integral and vital part of Panhandle's gas supply. Without the Trunkline gas, Panhandle could neither make the deliveries to Union nor meet the requirements of its general service, limited service and storage service customers in the United States. It has been shown that by Trunkline's own

estimate, a deficiency in its gas supply will exist less than 12 years hence; and, absent "minor contracts" which it

hopes to enter into, will exist less than three years hence. Without the exportation of the volumes of gas, from 10,500,000 Mcf to 15,500,000 Mcf annually, to Canada, such volumes can be available to help supply the foregoing requirements of Panhandle in the United States. They can also be available to supply the requirements of Trunkline's customers other than Panhandle, which consist of small general service customers. Obviously, the period of time before a deficiency in Trunkline's supply will occur, in meeting the requirements of such United States customers, can thereby be materially extended. In other words, the annual load factor at which the Trunkline system operates, and the annual withdrawal of gas reserves by Trunkline, can be less than would be required were the export permitted. Thereby, the total reserve life index of Trunkline's gas supply can be extended, and existing firm customers attached to the Panhandle and Trunkline systems can be assured of receiving service for a longer period of time than would be the case if the proposed export were authorized. Conversely, the proposed exportation would, throughout the term proposed, impair the ability of Panhandle and Trunkline to render adequate service to their firm customers in the United States.

Following a denial of the application in Docket No. G-2475, Panhandle and Trunkline may well take voluntary action to limit the annual volumes of gas transported in the Trunkline system, to

the end of prolonging the time before a deficiency will exist in Trunkline's gas supply. If not, appropriate requirements could be imposed by Commission order. It should also be observed that the limitation on the annual volumes of gas to be thus transported would not be unduly

prejudicial to Trunkline or Panhandle from an economic standpoint.

Under these circumstances, it is clear that the proposal to export gas to Canada should be denied. Section 3 of the Act prohibits an exportation of natural gas if the Commission finds that the proposed exportation "will not be consistent with the public interest." The legislative history of the Act shows that one purpose that Congress had in mind in adopting this section was the conservation of natural gas, in the event of gas shortages, by preventing its export. The Commission has consistently authorized an exportation only on a specific finding that the exportation will not impair the ability of an applicant to render adequate service to its customers in the United States (*In re United Gas Pipe Line Co.*, 2 F.P.C. 775, 776; *In re United Gas Corp.*, 2 F.P.C. 803, 804; *In re Juarez Gas Co.*, 2 F.P.C. 931, 932; *In re United Gas Pipe Line Co.*, 5 F.P.C. 553, 554); or that "the gas reserves presently available to applicant are adequate to permit the exportation * * * without impairing applicant's ability to meet the requirements of its customers in the United States" (*In re Panhandle Eastern Pipe Line Co.*, 5 F.P.C. 472). By denying the export authorization, Trunkline's gas supply can

be conserved for the requirements of Panhandle's and Trunkline's firm customers in the United States; and Panhandle and Trunkline will have greater ability than otherwise to render adequate service to such customers.

In the second place, the danger of future inadequate peak-period gas availability of the gas supply which Panhandle itself controls is a ground for denying authorization to export the gas. Similar general considerations apply as in the case of the Trunkline gas supply shortage,

although the situation from this aspect is less critical. The deficiency in gas resources from the Hugoton Field is primarily a question of peak-period availability. It has been seen that the Panhandle-Union contract calls for the maintenance of high load factor deliveries to Canada. This requirement imposes an obligation of heavy continuous field deliveries. In the absence of such obligation, Panhandle would be able to carry under-runs in its allowables from the Hugoton Field from one month to the next, and thereby reinforce its gas supply from the standpoint of availability. Thus, respecting the gas reserves which Panhandle controls, as well as those of Trunkline, the proposed exportation will impair the ability of Panhandle to meet the requiremnts of its customers in the United States.

In the third place, the application should be denied in view of the fact that, as an alternative to a limitation being placed on the annual volumes of gas to be transported in the Trunkline system,

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the gas which Panhandle proposes to export can be placed in storage in the Howell Field, in Michigan. This gas field, some 30 miles northwest of Detroit, was acquired by Panhandle for the purposes of production and eventual underground storage. If the gas which Panhandle seeks to export is put in storage, Panhandle will be enabled to meet unsatisfied firm peak-day requirements of its existing domestic customers.

Uncontradicted evidence presented by Michigan Consolidated shows that the Howell Field would now make a desirable storage field and that the field has ample capacity to store the 15,500,000 Mcf per year which Panhandle seeks to export. The general manager of Michigan Consolidated's production and pipeline district,

a man experienced in storage operations, estimated that the total cost to Panhandle of developing the Howell Field as a storage reservoir with a working capacity of 18,400,000 Mcf would be about $8,525,000, or a cost per Mcf of 46¢. Comparing the cost of the storage with that of equivalent peak-day transmission capacity, at the costs of the pipeline facilities which Panhandle here proposes to install and operate, it is clear that the project is economically feasible. Furthermore, the witness said that the development could be completed in one construction season, and that it is not necessary that partial utilization of the field for storage purposes await the completion of construction. He further testified that the gas could be withdrawn at rates "which would provide a very substantial increase in the peak-day capacity of the Panhandle system." Other

evidence shows that the present firm peak-day requirements of Panhandle's customers are at least 187,200 Mcf per day in excess of Panhandle's capacity as increased to that hereinafter authorized. And by the customers' estimates, their firm peak-day requirements will be still greater in the immediate future.

This evidence justifies the denial of the proposal to export gas. While it may be that the Commission cannot require Panhandle involuntarily to develop the Howell Field for storage (*Panhandle Eastern Pipe Line Co.* v. *Federal Power Commission, supra*, 204 F. 2d 675, 680), the Commission can properly deny the application for authorization to export on the ground that, with such volumes at its disposal, Panhandle has the means, through storage, to meet unsatisfied peak-day requirements of those customers.

Authorization to export the volumes of gas in question to Canada having been denied, Panhandle may voluntarily develop the Howell Field for the storage of such volumes. But impairment of Panhandle's present or future ability to render adequate service, at least to firm customers, through operation of the export proposal, is all that need be shown in order to warrant denial of the authorization sought. *Cf.* cases cited *supra*, page 58.

There is a still further consideration which goes to support the denial of the export authorization. The evidence shows, and the Examiner finds, in the language of the coal interests in their brief, that the proposed exportation "will do substantial injury to a large

segment of American labor and capital in that it would result in the displacement of large quantities of bituminous coal and anthracite produced in the United States." As in the case of an application for a certificate of convenience and necessity for natural-gas facilities and service, so here, the economic impact upon the coal and railroad industries and employees in such industries is a factor to be taken into account in the Commission's determination. *Cf. In re Natural Gas Pipeline Co. of America*, 5 F.P.C. 85, 109-10; *In re Michigan-Wisconsin Pipeline Co.*, 6 F.P.C. 1, 27.

The Examiner finds and concludes that for the reasons aforesaid the proposed exportation will not be consistent with the public interest.

Michigan Consolidated urges additional reasons for denying the export application by which the Examiner is not persuaded. The reasons are that Michigan Consolidated, so it is claimed, has a potential industrial market in the Detroit area for gas in excess of the volumes

which Panhandle proposes to export; that Michigan Consolidated is willing and desirous of purchasing from Panhandle, under Panhandle's I-1 Rate Schedule, such volumes on an interruptible basis; and that Panhandle is required, under the rate schedule, to offer such gas to Michigan Consolidated, as one of its customers in the United States. The record shows that all or almost all of the gas obtained under the I-1 Rate Schedule would be used in satisfying such industrial market; and that substantially all of such

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potential market consists of the use of gas as boiler fuel in substitution for coal.

In the Examiner's opinion, it is consistent with the public interest for natural gas to be exported to our neighbor and ally, Canada, for space-heating and other superior uses, rather than for the gas to be burned under boilers in this country when coal is available for such purpose. Furthermore, the gas proposed to be exported is high load factor gas, which during peak periods of demand could be devoted to meeting unsatisfied peak demands of Panhandle's existing firm wholesale customers.

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CLAIM OF MICHIGAN CONSOLIDATED THAT CERTIFICATES ISSUED TO PANHANDLE SHOULD BE CONDITIONED UPON PANHANDLE SUPPLYING INTERRUPTIBLE GAS TO MICHIGAN CONSOLIDATED

Michigan Consolidated argues that any certificates issued to Panhandle in Docket Nos. G-1705, G-2433 and G-8665 should contain the following condition:

"Panhandle shall deliver and sell up to 100,000 Mcf of natural gas per day to Michigan Consolidated on an inter-

ruptible basis and, within 60 days, Panhandle shall execute a service agreement with Michigan Consolidated providing for such delivery under its presently effective I-1 Rate Schedule."

The Examiner does not agree. The question of whether Panhandle should be required to supply interruptible gas to Michigan Consolidated is outside the scope of the issues presented in these proceedings.

PANHANDLE-TRUNKLINE MAXIMUM DAY CAPACITY

The question of the maximum day capacity of the Panhandle-Trunkline systems, upon completion of the construction of the facilities for which authorization is hereinafter granted, is covered in the staff brief in the following language:

"The combined Panhandle - Trunkline maximum day capacity with the construction sought will be such as to permit Panhandle to serve November through March contract demands it has negotiated, as shown on Exhibit 27-A, totaling 1,218,242 Mcf per day plus 2,000 Mcf for Panhandle's line tap customers. In addition, Panhandle and Trunkline will have available 28,500 Mcf for new applicants pursuant to Section 7(a) of the Natural Gas Act, and will be able to serve the existing contract demands on Trunkline as well as an additional 6,460 Mcf to Panhandle's [Liberty] Lateral. Trunkline's designed capacity with the new facilities will be 375,000 Mcf per day, an increase of 85,000 Mcf over present capacity."

The record supports the foregoing statements, and the Examiner adopts them as findings of fact.

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SECTION 7(a) APPLICATIONS

It has been noted that each of the Section 7(a) applicants seeks an order directing Panhandle or Trunkline, as the case may be, to establish a physical connection of its transportation facilities with the facilities of, and to sell gas to, the applicant.

In most instances, the volumes nominated by the Section 7(a) applicants constitute anticipated peak-day requirements for the fifth year of operation or later. In the ensuing treatment, specification of the applicants' estimates of their requirements is limited to their estimates for the third year of operation. The record justifies the conclusion that an allotment of an applicant's peak-day requirements for such year should enable it to have a feasible project if the project is otherwise feasible. The Staff correctly points out that "a greater volume allocation would tend to resrve to the applicant and correspondingly deprive other pipeline customers of the gas so allocated for an unreasonable length of time." Moreover, estimates covering a period beyond the third year of operation are correspondingly more speculative and uncertain, due to the increasing likelihood of altered economic and physical circumstances. The speculative nature of the estimates beyond such time becomes more marked where, as here, the facilities have not yet been placed in operation, and consequently the market to be served has not shaped into a tangible and definite pattern.

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FINDINGS AND CONCLUSIONS

Upon consideration of the evidence adduced and the briefs of counsel, it is further found and concluded that:

(1) Panhandle, a Delaware corporation having its principal office in Kansas City, Missouri, is a "natural-gas company" within the meaning of the Natural Gas Act, as heretofore found by the Commission (4 F.P.C. 1081, 1083).

(2) Trunkline, a Delaware corporation having its principal office in Houston, Texas, is a "natural-gas company" within the meaning of the Natural Gas Act, as heretofore found by the Commission (9 F.P.C. 721, 737).

(3) The facilities involved in Docket Nos. G-1705, G-2433 and G-8665, which Panhandle proposes to construct and or operate, and the facilities involved in Docket No. G-8664, which Trunkline proposes to construct and operate, are to be used in the transportation and sale of natural gas in interstate commerce for resale, subject to the jurisdiction of the Commission, as an integral part of Panhandle's and Trunkline's authorized pipeline systems, and the construction and operation of such facilities are subject to the requirements of subsections (c) and (e) of Section 7 of the Natural Gas Act.

(4) The facilities referred to in Finding and Conclusion (3) are adequate to render the service which Panhandle and Trunkline propose and which said applicants are hereinafter authorized to provide.

(5) Panhandle is able and willing properly to do the acts and to perform the service proposed by it in Docket Nos. G-1705 and G-8665; and to conform to the provisions of the Natural Gas Act, and the requirements, rules and regulations of the Commission thereunder.

(6) Subject to the satisfaction of the condition set out in Finding and Conclusion (11) hereof, Panhandle is able and willing properly to do the acts and to perform the

service proposed by it in Docket No. G-2433; and to conform to the provisions of the Natural Gas Act, and the requirements, rules and regulations of the Commission thereunder.

(7) Trunkline is able and willing properly to do the acts and to perform the service proposed by it in Docket No. G-8664; and to conform to the provisions of the Natural Gas Act, and the requirements, rules and regulations of the Commission thereunder.

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(8) The construction, operation and sales for which Panhandle and Trunkline seek authorization in the proceedings referred to in Finding and Conclusion (3), with the condition set out in Finding and Conclusion (11) respecting Docket No. G-2433, are required by the public convenience and necessity, and certificates therefor should be issued as hereinafter ordered and conditioned.

(9) Except as provided in Finding and Conclusion (11) relative to The Central West Utility Co., it is in the public interest that Panhandle continue to serve its resale customers with volumes of gas equal to the winter contract demands approved by the Commission in appendix A of its order of October 5, 1955, as corrected, during the winter months, unless modified in accordance with the provisions of the Natural Gas Act, and the Commission's Rules and Regulations; and that Panhandle serve, under the S-1 rate schedule, the volumes of storage gas which it proposes to sell to Michigan Gas Storage Co. and The East Ohio Gas Co., both existing customers of Panhandle.

(10) Trunkline should be authorized to sell and deliver to Panhandle a maximum daily volume up to but not exceeding 375,000 Mcf, the same being the maximum daily

design delivery capacity of its system as proposed, less the existing contract demands on Trunkline other than those of Panhandle, and less such volumes as hereinafter directed to be sold to others than Panhandle, and less any volumes reserved for the Section 7(a) applicants referred to in Finding and Conclusion (18), pending opportunity afforded them to make a further showing in support of their applications.

(11) The public convenience and necessity require that the issuance of the certificate of public convenience and necessity in Docket No. G-2433, and the exercise of rights granted thereunder, be conditioned on the elimination within 90 days of the discrimination in service practiced against The Central West Utility Co., by providing Central West service comparable to that of other Panhandle customers being served from laterals which Panhandle has voluntarily undertaken to improve. The service which Panhandle should afford Central West is a contract demand of 12,000 Mcf, which volume Panhandle should be prepared to deliver to Central West's existing delivery point on the Liberty Lateral.

(12) The exportation of natural gas from the United States to Canada which Panhandle proposes, in Docket No. G-2475, consisting of its sale and delivery of increased volumes of gas to Union, will not be consistent with the public interest, and should be denied.

* * * * * * * * * *

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ORDER

WHEREFORE, IT IS ORDERED, subject to review by the Commission on appeal, or review by the Commission on its own motion, as provided in its Rules of Practice and Procedure, that:

(A) A certificate of public convenience and necessity be and the same is hereby issued in Docket Nos. G-1705, G-2433 and G-8665 authorizing Panhandle Eastern Pipe Line Co. to construct and operate the facilities presently involved in said proceedings, hereinbefore described and described in their applications as amended and supplemented, for the transportation and sale of natural gas as therein set forth, upon the terms and conditions of this order.

(B) As a condition attached to the exercise of the rights granted under the certificate issued in paragraph (A) hereof, Panhandle, except as provided in paragraph (D) hereof relative to The Central West Utility Co., shall serve its resale customers with volumes of gas equal to the winter contract demands approved by the Commission in appendix A of its order of October 5, 1955, as corrected, during the winter months, unless modified in accordance with the provisions of the Natural Gas Act, and the Commission's Rules and Regulations; and Panhandle shall serve, under the S-1 rate schedule, the volumes of storage gas which it proposes to sell to Michigan Gas Storage Co. and The East Ohio Gas Co.

(C) As a condition attached to the exercise of the rights granted under the certificate issued in paragraph (A) hereof, the facilities being authorized shall not be used for the transportation or sale of natural gas to any new customer except upon specific authorization of the Commission.

(D) As a condition attached to exercise of the rights granted under the certificate issued in paragraph (A) hereof, insofar as they pertain to Docket No. G-2433, Panhandle shall provide The Central West Utility Co. service consisting of a contract demand of 12,000 Mcf, which

volume Panhandle shall be prepared to deliver to Central West's existing delivery point on the Liberty Lateral within 90 days from the date of issuance of this order.

(E) The certificate granted in paragraph (A) hereof shall be accepted in writing and under oath, by a responsible official of Panhandle; and the general terms and conditions set forth

in paragraphs (a), (b), (c)(1), (c)(3), (c)(4) and (e) of Section 157.20 of the Commission's Rules and Regulations, including the Rules of Practice and Procedure, shall attach to the issuance of the certificate granted in paragraph (A) hereof, and to the exercise of the rights granted thereunder.

(F) A certificate of public convenience and necessity be and the same is hereby issued in Docket No. G-8604 authorizing Trunkline Gas Co. to construct and operate the facilities involved in said proceeding, hereinbefore described and more particularly described in its application, for the transportation and sale of natural gas as therein set forth, upon the terms and conditions of this order.

(G) Upon the filing by the Section 7(a) applicants referred to in paragraph (18) of the Findings and Conclusions, or any of them, of the statements there referred to, expressing a desire on their part to make a further showing relative to the economic and financial feasibility of their respective projects, Trunkline is hereby authorized and directed to reserve from the delivery capacity of its gas system for the applicants who have filed such statements, volumes of natural gas which shall not exceed the following respective volumes, pending the Commission's final orders in the instant matters involving said applicants:

	Mcf
City of Hickman, Ky.	1,087
City of Clinton, Ky.	474
City of LaCenter, Ky.	436
City of Bardwell, Ky.	459
City of Wickliffe, Ky.	549
Lake County Utility District	2,226

(H) As a further condition attached to the exercise of the rights granted under the certificate issued in paragraph (F) hereof, Trunkline shall sell to Panhandle, under the applicable rate schedule, such volumes of gas as it transports in its system up to but not exceeding 375,000 Mcf, the same being the maximum daily design delivery capacity of its proposed system, less the existing authorized contract demands on Trunkline other than those of Panhandle, and less such volumes as are hereinafter directed to be sold to others than Panhandle, and less any volumes reserved for the Section 7(a) applicants referred to in paragraph (G) hereof.

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(I) The certificate granted in paragraph (F) hereof shall be accepted in writing and under oath, by a responsible official of Trunkline; and the general terms and conditions set forth in paragraphs (a), (b), (c)(1), (c)(3), (c)(4), and (e) of Section 157.20 of the Commission's Rules and Regulations, including the Rules of Practice and Procedure, shall attach to the issuance of the certificate granted in paragraph (F) hereof, and to the exercise of the rights granted thereunder.

(J) The time within which such of the facilities authorized in paragraphs (A) and (F) hereof, as have not already been constructed and placed in operation under temporary authorization, shall be constructed and placed

in actual operation, as provided by paragraph (b) of Section 157.20 of the Commission's Rules of Practice and Procedure, is hereby fixed at 6 months from the date on which this order issues.

(K) The certificates issued herein are not transferable and shall be effective so long as the respective applicants continue the acts or operations hereby authorized in accordance with the provisions of the Natural Gas Act, this order, and the applicable rules, regulations and orders of the Commission heretofore or hereafter issued.

(L) The grant of the certificates herein shall not be construed as a waiver of the requirements of Section 4 of the Natural Gas Act, or of Section 154 of the Commission's Rules and Regulations thereunder requiring the filing of rate schedules for the service herein authorized; and is without prejudice to any findings or orders which have been or may hereafter be made by the Commission in any proceeding now pending or hereafter instituted by or against the applicants.

(M) No decision is being rendered in Docket No. G-1927, and the questions thereby presented are reserved for further action by the Commission.

(N) The application of Panhandle in Docket No. G-2475 be and the same is hereby denied.

(O) In Docket Nos. G-2057, G-2932, G-3159, G-4611, G-4666, G-4940, G-5139, G-5979, G-8428 and G-8431, Panhandle be and it is hereby directed to establish and maintain physical connection of its transportation facilities with the facilities to be constructed by applicants Missouri Public Service Co., City of Montgomery, Missouri, Town Gas Co. of Illinois, Missouri Central Natural Gas Co., Village of Westville, Illinois, Village of Pleasant Hill, Illinois, City of Waverly, Illinois,

Village of Rossville, Illinois, Central Illinois Electric and Gas Co., and City of Winchester, Illinois, at appropriate points of interconnection, and to deliver and sell to said applicants through such physical connections their natural-gas requirements not to exceed the volumes set out in paragraph (14) of the Findings and Conclusions; *Provided, however,* that prior to the establishment of the physical connection with the facilities of, and the delivery and sale of any natural gas by Panhandle to, Missouri Public Service Co., there shall be filed with this Commission a final certificate of convenience and necessity, granted by the Public Service Commission of the State of Missouri, authorizing the construction and operation of the North Central Missouri Project.

(P) Panhandle shall report to the Commission in writing, under oath, the date of commencement of operations and service to the respective applicants in the proceedings referred to in paragraph (O) hereof.

(Q) The application of the Village of Franklin, Illinois in Docket No. G-8471, be and the same is hereby denied.

(R) In Docket Nos. G-8676 and G-8677, Trunkline be and it is hereby directed to establish and maintain physical connection of its transportation facilities with the facilities to be constructed by applicants City of McLeansboro, Illinois, and City of Vienna, Illinois, at appropriate points of interconnection, and to deliver and sell to said applicants through such physical connections their natural-gas requirements not to exceed the volumes set out in paragraph (17) of the Findings and Conclusions.

(S) Trunkline shall report to the Commission in writing, under oath, the date of commencement of operations and service to the respective applicants in the proceedings referred to in paragraph (R) hereof.

(T) If applicants City of Hickman, Kentucky (Docket No. G-8526), City of Clinton, Kentucky (Docket No. G-8771), City of LaCenter, Kentucky (Docket No. G-8888), City of Bardwell, Kentucky (Docket No. G-8939), City of Wickliffe, Kentucky (Docket No. G-8962), and Lake County Utility District (Docket No. G-8963), or any of them, desire an opportunity to present further evidence in support of the economic and financial feasibility of their respective projects in the event this decision insofar as it relates to them should become effective as the decision of the

Commission, or should be affirmed by the Commission on appeal, said applicants, or those of them desiring to make such further showing, shall, within 20 days from the date of issuance of this order, file statements in writing making known such desire. Any of said applicants who fails to file such statement as prescribed shall thereby be foreclosed from making such further showing.

(U) Unless the Section 7(a) applicants referred to in paragraphs (O) and (R) hereof, within the period of one year from the date on which this order issues, shall have constructed and placed in operation their respective projects to the extent of being able to receive service from Panhandle or Trunkline as the case may be, said paragraphs (O) and (R) shall no longer be in force or effect as to those of said applicants who have failed, within such period of time, so to construct and place in operation their projects.

HOWELL PURDUE
Howell Purdue
Presiding Examiner

Filed: March 6, 1956
Issued: March 6, 1956

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BEFORE THE

FEDERAL POWER COMMISSION

In the Matters of

PANHANDLE EASTERN PIPE LINE COMPANY	Docket Nos. G-1705, G-1937, G-2433, G-2475, and G-8665
MISSOURI PUBLIC SERVICE COMPANY	Docket No. G-2057
	Docket No. G-2932
TOWN GAS COMPANY OF ILLINOIS	Docket No. G-3159
MISSOURI CENTRAL NATURAL GAS COMPANY	Docket No. G-4611
VILLAGE OF WESTVILLE, ILLINOIS	Docket No. G-4666
VILLAGE OF PLEASANT HILL, ILLINOIS	Docket No. G-4940
CITY OF WAVERLY, ILLINOIS	Docket No. G-5139
VILLAGE OF ROSSVILLE, ILLINOIS	Docket No. G-5979
CENTRAL ILLINOIS ELECTRIC & GAS COMPANY	Docket No. G-8428
CITY OF WINCHESTER, ILLINOIS	Docket No. G-8431
VILLAGE OF FRANKLIN, ILLINOIS	Docket No. G-8471
CITY OF HICKMAN, KENTUCKY	Docket No. G-8526
TRUNKLINE GAS COMPANY	Docket No. G-8664
CITY OF MCLEANSBORO, ILLINOIS	Docket No. G-8676
CITY OF VIENNA, ILLINOIS	Docket No. G-8677
CITY OF CLINTON, KENTUCKY	Docket No. G-8771
CITY OF LACENTER, KENTUCKY	Docket No. G-8888
CITY OF BARDWELL, KENTUCKY	Docket No. G-8939
CITY OF WICKLIFFE, KENTUCKY	Docket No. G-8962
LAKE COUNTY UTILITY DISTRICT	Docket No. G-8963

Exceptions of Michigan Consolidated Gas Company to Presiding Examiner's Decision

Comes now Michigan Consolidated Gas Company (Michigan Consolidated), an intervenor in the above-entitled proceedings, and submits these exceptions to the Presiding Examiner's decision issued herein on March 6, 1956.

I.

Michigan Consolidated is a public utility engaged in the production, purchase, transportation, distribution and sale of natural gas in various cities, towns, villages and townships within the State of Michigan. These activities are carried on in eight separate districts in and around Detroit, Ann Arbor, Grand Rapids, Muskegon, Mount Pleasant, Greenville-Belding, Big Rapids and in its Pipeline District.

Michigan Consolidated purchases 125,000 Mcf of natural gas daily from Panhandle Eastern Pipe Line Company (Panhandle) at Detroit and 2,000 Mcf daily at Ann Arbor. Michigan Consolidated has long been one of Panhandle's largest customers.

II.

As this Commission is well aware, Michigan Consolidated has been attempting for many years to obtain up to 100,000 Mcf of natural gas daily from Panhandle on an interruptible basis. Panhandle refuses Michigan Consolidated any interruptible gas despite the fact that Rate Schedule I-1 of Panhandle's FPC Gas Tariff providing for interruptible service is fully effective. Such rate schedule (as amended by Opinion No. 274 issued July 28, 1954) provides that whenever Panhandle has available gas in excess of that required for firm sales it shall offer not less than 20% of such gas to buyers having storage available. Not less than one-half of the remaining

excess gas shall be offered on a non-discriminatory basis to all of Panhandle's purchasers for resale.

Although Michigan Consolidated has very substantial storage capacity available and is entitled under Panhandle's tariff to receive large volumes of interruptible gas

from Panhandle the latter persists in its refusal to sell any interruptible gas to Michigan Consolidated. As clearly set forth in its petition to intervene in opposition to Panhandle's export application Docket No. G-2475, one of the principal reasons for Michigan Consolidated's participation in these proceedings was to have the Commission order Panhandle to deliver interruptible gas to Michigan Consolidated under the interruptible schedule. These exceptions are directed principally to the Examiner's refusal to require Panhandle to make deliveries of gas to Michigan Consolidated on an interruptible basis.

III.

Michigan Consolidated excepts to the following part of the Presiding Examiner's decision herein (p. 69):

"Michigan Consolidated argues that any certificates issued to Panhandle in Docket Nos. G-1705, G-2433 and G-8665 should contain the following condition:

"'Panhandle shall deliver and sell up to 100,000 Mcf of natural gas per day to Michigan Consolidated on an interruptible basis and, within 60 days, Panhandle shall execute a service agreement with Michigan Consolidated providing for such delivery under its presently effective I-1 Rate Schedule.'

"The Examiner does not agree. The question of whether Panhandle should be required to supply interruptible gas to Michigan Consolidated is outside the scope of the issues presented in these proceedings."

Contrary to the Examiner's conclusion the adequacy of service to an existing customer and the question of the applicant's refusal to abide by the Act and the Commission's rules and orders thereunder—which are questions

raised by Panhandle's persistent refusal over the years to make deliveries of interruptible gas to Michigan Consolidated—are always in issue in a certificate case. The disposition of the gas to be made available through the facilities sought to be authorized constitutes the very heart of every certificate case. Moreover, before the Commission can issue a certificate under the Act it must first make the statutory finding required under Section 7(e) of the Act that the applicant is able and willing "to conform to the provisions of the Act and the requirements, rules and regulations of the Commission thereunder."

In addition to the fact that the subject matter of the requested condition is inherent in every certificate case, such issue was expressly brought into the case by Michigan Consolidated's petition to intervene in the Panhandle export matter, Docket No. G-2475. In its petition Michigan Consolidated recited its lengthy but unsuccessful efforts to obtain up to 100,000 Mcf of natural gas per day from Panhandle and in

support of its objections to Panhandle's application stated its need for such gas and Panhandle's persistent refusal to supply it in direct violation of the requirements of its tariff.

At the hearings in these proceedings, Michigan Consolidated presented evidence of its efforts to obtain interruptible gas from Panhandle and evidence of Panhandle's refusal to supply it (Exhs. 229-236). Michigan Consolidated also presented evidence showing that it could store all of the interruptible gas received from Panhandle to meet firm requirements or that it could sell the gas directly to industry (Tr. 8286-7, 8497, 8552, 8568). In either event it was shown that the ultimate consumers would obtain substantial benefits (Tr. 8509-11, 8522-3, 8561-2, 8290-1).

At the time this evidence was being presented counsel for Panhandle questioned the relevance of any evidence tending to support Michigan Consolidated's request that Panhandle be required to provide it with interruptible gas. In overruling the objections of Panhandle the Examiner indicated that (Tr. 8258) such matter goes "directly to the question as to whether there is going to be gas available for export to Canada" and ruled specifically that such matters are in issue stating as follows (Tr. 8266):

"Presiding Examiner: Mr. Shibley, it appears to the Examiner that the line of testimony is directly within the scope of the issues raised by previous orders of the Commission wherein export to Canada has been authorized, that the needs of customers in this country should be first satisfied."

It is submitted therefore that the relief requested by Michigan Consolidated is clearly within the issues in these consolidated proceedings and that the Commission should modify the Presiding Examiner's decision to include in any certificates issued to Panhandle the above-quoted condition.

IV.

Michigan Consolidated is in accord with the Presiding Examiner's denial of Panhandle's application in Docket No. G-2475 for authority to export additional volumes of gas to Canada. However, Michigan Consolidated takes exception to the Examiner's view of the law respecting the export of gas required for industrial use in the United States. The Examiner states in his decision as follows (pp. 62-63):

"Michigan Consolidated urges additional reasons for denying the export application by which the Examiner is

not persuaded. The reasons are that Michigan Consolidated, so it is claimed, has a potential industrial market in the Detroit area for gas in excess of the volumes which Panhandle proposes to export; that Michigan Consolidated is willing and desirous of purchasing from Panhandle, under Panhandle's I-1 Rate Schedule, such volumes on an interruptible basis; and that Panhandle is required, under the rate schedule, to offer such gas to Michigan Consolidated, as one of its customers in the United States. The record shows that all or almost all of the gas obtained under the I-1 Rate Schedule would be used in satisfying such industrial market; and that substantially all of such potential market consists of the use of gas as boiler fuel in substitution for coal.

"In the Examiner's opinion, it is consistent with the public interest for natural gas to be exported to our neighbor and ally, Canada, for space-heating and other superior uses, rather than for the gas to be burned under boilers in this country when coal is available for such purpose. Furthermore,

the gas proposed to be exported is high load factor gas, which during peak periods of demand could be devoted to meeting unsatisfied peak demands of Panhandle's existing firm wholesale customers."

Because the Examiner based his denial of Panhandle's export application upon other grounds, the foregoing statement is *obiter dictum*. Notwithstanding, his statement is an erroneous interpretation of both the statute and of the evidence of record and should therefore be stricken.

The above-quoted statement fails to give effect to the primary objective of Congress in enacting Section 3 of the Act, namely, that of controlling the export of gas from the United States to assure adequate service to con-

sumers in the United States. The relative urgency and character of the needs of consumers in the United States are not to be weighed against the character of use to which the gas to be exported would be put in Canada. Neither the Federal Power Commission nor any other agency of the United States has any control over the use of the gas once it reaches Canada. As a consequence, any consideration of the "end-use" of the gas in the United States versus that proposed in Canada would be purely academic.

The legislative history of the Act shows that Congress did not intend that the Commission should authorize the exportation of natural gas when such exportation might impair the adequacy of service in the United States or adversely affect consumers in the United States. When the Act was debated on the floor of the Senate a colloquy took place between

Senator Wheeler of Montana, who had charge of the legislation in the Senate, and Senator White of Maine concerning Section 3, as follows (Cong. Rec., Vol. 81, Part 8, p. 9313):

"Mr. White. The provision to which I refer reads that—

"No person shall export any natural gas from the United States to a foreign country or import any natural gas from a foreign country.

"Mr. Wheeler. That is for the purpose of conserving our natural gas in the event we wanted to conserve it. Suppose, for instance, that natural gas were being transported from this country into Canada *when we had a shortage of natural gas*, or suppose we were selling quantities of natural gas to foreign countries when we should not do it.

"Mr. White. That is quite true, but the prohibition against imports of gas would not be in behalf of the conservation of our gas supply.

"Mr. Wheeler. On the other hand, it might be that some company wanted to import natural gas from Mexico, and the Commission might feel that it was not in the public interest that it should be imported into this country. So the bill simply gives the Commission power over interstate commerce either to prevent or to permit as the public interest may dictate."

In administering Section 3 of the Act, the Commission has recognized that Congress intended to prohibit the exportation of natural gas if it would impair the adequacy of service in the United States.

Thus, Section 153.3(h) of the Commission's Regulations under the Act provides that applications for authorization to export natural gas shall contain:

"A statement of the reasons why the proposed exportation or importation of natural gas (1) will

not be inconsistent with the public interest and (2) will not in any way impair the ability of applicant to render natural gas service at reasonable rates to *its customers in the United States.*"

In accordance with the foregoing, the Commission has authorized exportation only upon a specific finding that the natural gas in question was "not needed for other markets in the United States" and that the exportation of such gas would "not impair the ability of applicant to render adequate service at reasonable rates to its customers in the United States."[1]

[1] See order of June 25, 1940 in Docket No. G-102 (2 F.P.C. 775); order of September 10, 1940 in Docket No. G-103 (2 F.P.C. 803); orders of April 25, 1941 in Docket No. G-107 (2 F.P.C. 931); order of April 23, 1946 in Docket

As shown under Section III of these exceptions, Panhandle is required under its presently effective tariff to offer any gas available over firm requirements to its present customers in the United States. The use to which the gas would be put by the ultimate consumer has nothing to do with the right of the distributor to obtain the gas from Panhandle. The inclusion of any "end-use" criteria in the tariff by interpretation would be of highly questionable validity. *Cf. Department of Conservation* v. *Federal Power Commission* (C.A. 5-1945) 148 F. 2d 746, 750; cert. denied, 326 U.S. 717.

In view of the foregoing it is respectfully submitted that the Commission should strike the above-quoted

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language appearing at pages 62 and 63 of the Presiding Examiner's decision and condition any certificates which may be issued to Panhandle in Docket Nos. G-1705, G-2433 or G-8665 to require Panhandle to deliver and sell up to 100,000 Mcf of natural gas per day on an interruptible basis to Michigan Consolidated and require Panhandle to execute a service agreement with Michigan Consolidated providing for such deliveries under Panhandle's I-1 Rate Schedule.

Respectfully submitted,

MICHIGAN CONSOLIDATED GAS COMPANY

By .....

CHARLES V. SHANNON, *Its Attorney*

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1700 K. Street, N. W.
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Attorneys for Michigan Consolidated Gas Company

No. G-612 (5 F.P.C. 472); order of June 6, 1946 in Docket No. G-102 (5 F.P.C. 553); and order of November 10, 1947 in Docket No. G-104 (6 F.P.C. 1055).

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Exceptions of Commission Staff Counsel to Initial Decision of the Presiding Examiner

* * * * * * * * * *

19622

EXCEPTION NO. 5

Staff Counsel except to the failure of the Examiner's decision to recognize as a reason for the denial of the export of additional gas to Canada the provision of Panhandle's I-1 rate schedule setting forth an orderly procedure for Panhandle to dispose of gas in excess of its firm and annual contract requirements. In connection therewith, the decision on pages 62 and 63 seeks to compare Michigan Consolidated Gas Company's proposed sale of additional gas from Panhandle for boiler fuel uses as against space heating and "other superior uses" in Canada. These statements are inconsistent with the provisions of the I-1 rate schedules promulgated by the Commission in Opinion Nos. 214 and 214-A and affirmed by the Commission in Opinion No. 274, as well as with the provisions of Panhandle's previous authorization for export to Canada which provides

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for priority of service to industrial uses in the United States and with Section 3 of the Natural Gas Act, which provides that authorization for export shall be denied if it is not consistent with the public interest. The public interest referred to therein is that of the United States; and in the absence of other factors not present in this case, such an evaluation of public interest does not permit a comparative examination of the proposed uses of the gas in Canada and the United States. Accordingly, it is recommended that the last paragraph on page 62 and the first full paragraph on page 63 of the decision be deleted.

* * * * * * * * * *

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UNITED STATES OF AMERICA
FEDERAL POWER COMMISSION

Before Commissioners: Jerome K. Kuydendall, Chairman; Claude L. Draper, Seaborn L. Digby, Frederick Stueck and William R. Connole.

IN THE MATTERS OF

PANHANDLE EASTERN PIPE LINE COMPANY	Docket Nos. G-1705, G-1937, G-2433, G-2475, and G-8665
MISSOURI PUBLIC SERVICE COMPANY	Docket No. G-2057
CITY OF MONTGOMERY, MISSOURI	Docket No. G-2932
TOWN GAS COMPANY OF ILLINOIS	Docket No. G-3159
MISSOURI CENTRAL NATURAL GAS COMPANY	Docket No. G-4611
VILLAGE OF WESTVILLE, ILLINOIS	Docket No. G-4666
VILLAGE OF PLEASANT HILL, ILLINOIS	Docket No. G-4940
CITY OF WAVERLY, ILLINOIS	Docket No. G-5139
VILLAGE OF ROSSVILLE, ILLINOIS	Docket No. G-5979
CENTRAL ILLINOIS ELECTRIC & GAS COMPANY	Docket No. G-8428
CITY OF WINCHESTER, ILLINOIS	Docket No. G-8431
VILLAGE OF FRANKLIN, ILLINOIS	Docket No. G-8471
CITY OF HICKMAN, KENTUCKY	Docket No. G-8526
TRUNKLINE GAS COMPANY	Docket No. G-8664
CITY OF MCLEANSBORO, ILLINOIS	Docket No. G-8676
CITY OF VIENNA, ILLINOIS	Docket No. G-8677
CITY OF CLINTON, KENTUCKY	Docket No. G-8771
CITY OF LACENTER, KENTUCKY	Docket No. G-8888
CITY OF BARDWELL, KENTUCKY	Docket No. G-8939
CITY OF WICKLIFFE, KENTUCKY	Docket No. G-8962
LAKE COUNTY UTILITY DISTRICT	Docket No. G-8963

Order Severing Proceedings and Directing Sale and Delivery of Natural Gas

(Issued May 18, 1956)

These consolidated proceedings, which arose on applications by Panhandle Eastern Pipe Line Company (Panhandle) and Trunkline Gas Company (Trunkline) for cer-

tificates of public convenience and necessity under Section 7(c) of the Natural Gas Act (Act) involve, among other things, applications under Section 7(a) of the Act by some 19 parties for orders directing Panhandle or Trunkline to establish connections with and sell natural gas to such parties. Twelve of the Section 7(a) applicants, namely Missouri Public Service Company, Docket No. G-2057; City of Montgomery, Missouri, Docket No. G-2932; Town Gas Company of Illinois, Docket No. G-3159; Missouri Central Natural Gas Company, Docket

No. G-4611; Village of Westville, Illinois, Docket No. G-4666; Village of Pleasant Hill, Illinois, Docket No. G-4940; City of Waverly, Illinois, Docket No. G-5139; Village of Rossville, Illinois, Docket No. G-5979; Central Illinois Electric and Gas Company, Docket No. G-8428; City of Winchester, Illinois, Docket No. G-8431; City of McLeansboro, Illinois, Docket No. G-8676; and City of Vienna, Illinois, Docket No. G-8677, have filed motions to sever their applications from these consolidated proceedings and for immediate Commission decision thereon.

On the basis of the facts herein, we find that the public interest requires that the proceedings respecting the 12 Section 7(a) applicants enumerated above be severed from the above-entitled consolidated proceedings for the purpose of our rendering decision on the aforesaid applications. Some of these applications have been pending before us for a considerable time. Now, however, hearings have been concluded and the record is complete with respect thereto, as well as with respect to such other issues as have bearing on the question of the authorization sought by these applications. The Presiding Examiner has handed down his decision in which he determined that the aforementioned applications should be granted. No exceptions have been

filed to these determinations of the Examiner, and time for filing exceptions has expired so that all objections thereto are waived.

Furthermore, many of the issues involving other than the Section 7(a) applications are complex and controversial and it cannot be said when they may be finally determined. No useful purpose would be served by postponement of decision on these applications until such uncertain future time as the other issues herein are finally determined. On the contrary, such action would be contrary to the public interest. Delay in final decision on the authorizations sought by the 12 Section 7(a) applicants would delay financing and construction of their facilities necessary to receive service and thereby perhaps delay applicants' useage of natural gas beyond the 1956-1957 heating season. This would postpone the initial revenues to be derived from the respective systems, and would deprive the communities involved, at least for a time, of the advantages of the natural-gas service which they want and can use.

Moreover, there is no obstacle to severing the proceedings respecting these applications and rendering final decision on them now. As mentioned, the record is complete with respect thereto, and all prerequisites to Commission authorization have been met. Panhandle and Trunkline have signified their willingness to supply volumes of gas to meet these parties' third-year peak demands. Also, Panhandle and Trunkline have been granted authority to construct the major pipeline facilities needed to serve applicants, and are willing and able to render the requested service. Decision now on the applications of the 12 parties in question will not prejudice any other

party. In these and the other circumstances presented herein, we find that the applications of the 12 parties

enumerated above should be severed from these consolidated proceedings and final decision on these applications be rendered forthwith.

Aplicants' proposals—At the outset, it should be noted that the volumes of gas nominated by the Section 7(a) applicants constitute anticipated peak-day requirements for the fifth year of operation or later. However, in the circumstances of this case, applicants' estimates for the third year of operation constitute a sufficient and proper basis for our determinations hereinafter reached. This is so for the following reasons: an allotment of an applicant's peak-day requirements for the third year of operation should enable it to have a feasible project if the project is otherwise feasible; a greater volume allocation would tend to reserve to the applicant and correspondingly deprive other pipeline customers of the gas so allocated for an unreasonable length of time; and estimates covering a period beyond the third year of operation are correspondingly more speculative and uncertain. Also it is pertinent to observe that Panhandle is willing to deliver gas to the Section 7(a) applicants in question and in fact has entered into service agreements with Missouri Public Service Company and Missouri Central Natural Gas Company. Central Illinois Electric & Gas Company is an existing customer of Panhandle. Trunkline is willing to serve the cities of McLeansboro and Vienna.

Turning to applicants' separate proposals, Missouri Public Service Co. (Missouri Public Service), the applicant in Docket No. G-2057, is engaged in public utility operations in western and north-central Missouri. It supplies electric or gas service to approximately 148 incorporated municipalities and communities, and water service to a small number of municipalities. The company proposes to install a high pressure pipeline commencing at a point of connection with Panhandle's main pipeline system near

New Franklin, Missouri, and extending in a northwesterly direction for a distance of approximately 109 miles. By means of this pipeline, applicant proposes to transport natural gas to 15 municipalities in Missouri now without natural gas service, namely: Glasgow, Dalton, Bucklin, Meadville, Utica, Salisbury, Brunswick, Brookfield, Wheeling, Chula, Keytesville, Marceline, Laclede, Chillicothe and Trenton. The 1950 U. S. census gives the total population of the 15 communities as 32,559. The two largest cities, Chillicothe and Trenton, have populations of 8,694, and 6,157, respectively. Missouri Public Service now serves propane air gas in Chillicothe and Trenton. The company proposes to rehabilitate and extend its distribution systems in these two cities, and to install and operate distribution systems in the remainder of the communities. The total estimated cost of the project, referred to as the "North Central Missouri Project," is $5,424,462. The company's outstanding securities as of October 31, 1954, amount to $27,304,041.

Missouri Public Service proposes to obtain additional financing in the amount of $11,800,000, part of which will be used to defray the cost of the project. Of the securities in such amount proposed to be issued,

$8,000,000 will consist of first mortgage bonds covering substantially all of the properties of the company now owned or hereafter acquired, and the remainder will consist of common stock. The company estimates that its peak-day requirements in the third year of operation will be 18,208 Mcf, and its annual requirements in that year, 3,276,194 Mcf.

In Docket No. G-2932, applicant City of Montgomery, Missouri, proposes to install and operate a distribution system in Montgomery, and a lateral line, approximately

eight miles in length, which will interconnect its system and a lateral line of the Panhandle system near Wellsville, Missouri. The estimated cost of the project is $320,000, to be financed by the issue and sale of gas revenue bonds. Montgomery has a population of approximately 2,000. This applicant estimates that its peak-day requirements in the third year of operation will be 649 Mcf, and its annual requirements in such year, 61,010 Mcf.

In Docket No. G-4611, applicant Missouri Central Natural Gas Co. (Missouri Central) proposes to install and operate a lateral line commencing at a point of connection with a lateral line of Panhandle near Moberly, Missouri, and extending in a northerly direction for a distance of 25 miles to Macon, Missouri. The proposed lateral will pass adjacent to the unincorporated communities of Cairo, Jacksonville and Excello, Missouri. Missouri Central is now engaged in the distribution and sale of propane air gas at Macon. This company would serve Macon and the three unincorporated communities with natural gas. It would utilize and expand the existing distribution system at Macon, and would construct distribution systems in the other three communities. In the first year, expenditures for construction work, franchises and permits would amount to $476,530; and in the four ensuing years there would be certain incidental expenditures. It is proposed that the necessary funds be raised by the issue and sale of $100,000 of common stock; $400,000 of 20-year first mortgage revenue bonds, payable from a sinking fund; and $60,000 of 15-year debentures—a total of $560,000. Of this sum, $65,000 will be used to liquidate outstanding obligations; and the remainder, $495,000, will be used to cover the construction costs and the other miscellaneous items. Macon has a population of approximately 5,000, and the three unincorporated communities a total population of some 541. This applicant's estimated peak day require-

ments in the third year of operation are 1,391 Mcf; and its estimated third year annual requirements, 196,684 Mcf.

In Docket No. G-4666, applicant Village of Westville, Illinois, proposes to install and operate distribution systems in Westville and in Unionville, an adjacent unincorporated community, and a one-mile lateral supply line which will interconnect with a Panhandle lateral line known as its Danville, Illinois, lateral. The estimated cost of the project is $459,156, to be financed by the issue and sale of gas revenue bonds.

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Westville and Unionville have a combined population of approximately 4,500. This applicant estimates that its peak-day requirements in the third year of operation will be 1,039 Mcf; and its annual requirements in that year, 90,095 Mcf.

In Docket No. G-4940, applicant Village of Pleasant Hill, Illinois, proposes to install and operate a distribution system in the village, and a lateral supply line, 1.6 miles in length, which will interconnect its system and Panhandle's main pipeline system. The estimated cost of the project is $160,000, to be financed by the issue and sale of gas revenue bonds. The population of Pleasant Hill is between 900 and 1,000. The estimated peak-day requirements in the the third year of operation are 518 Mcf, and the annual requirements in that year, 38,143 Mcf.

In Docket No. G-5039, applicant City of Waverly, Illinois, proposes to install and operate a distribution system in Waverly and the contiguous area, and a lateral supply line, one-half mile in length, which will interconnect its system and Panhandle's main pipeline system. The total estimated cost of construction is $248,000, to be financed by the issue and sale of gas revenue bonds. Approximately 1,400 persons reside in the proposed service area. This applicant's estimated peak-day requirements in the third

year of operation are 644 Mcf, and its estimated third-year annual requirements, 48,400 Mcf.

In Docket No. G-5979, applicant Village of Rossville, Illinois, proposes to construct and operate a distribution system in the village, and a stub line, 550 feet in length, which will connect its system and an adjacent Panhandle lateral line known as the Hoopeston Lateral. The proposed facilities will be constructed at an estimated cost of $208,195, and are to be financed by the issue and sale of gas revenue bonds in the amount of $210,000. The population of Rossville is approximately 1,500. This applicant estimates its peak-day requirements in the third year of operation as 643 Mcf, and its annual requirements in such year, 62,061 Mcf.

In Docket No. G-8428, Central Illinois Electric and Gas Co. (Central Illinois) proposes to construct and operate a distribution system in Delavan, Illinois, and a stub line 2,000 feet in length which will interconnect the system with Panhandle's Peoria lateral. The estimated cost of construction is $121,300. Central Illinois has long been engaged in a variety of utility services in Illinois, and will defray the cost from funds on hand. According to the U. S. census in 1950 the population of Delavan was 1,248. The estimated peak-day requirements for Delavan in the third year of operation are 626 Mcf, and the estimated annual requirements in that year, 63,630 Mcf. In addition, Central Illinois seeks an increase in the allocation of gas from Panhandle for natural-gas service which it now supplies to Lincoln, Illinois. The increase in winter contract demand requested is from 6,420 Mcf to 7,100 Mcf. By order issued October 5, 1955, the Commission granted this increase on a temporary basis, from December 1, 1955 to March 31, 1956.

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In Docket No. G-8431, applicant City of Winchester, Illinois, proposes to construct and operate a distribution

system in Winchester and the adjacent urban area, and a 4-inch lateral line 4½ miles in length which would connect that system and Panhandle's main pipeline system. The cost of the project, estimated by the applicant as $290,000, would be financed by the issue and sale of gas revenue bonds. The population in the proposed service area is approximately 2,000. This applicant estimates that its peak-day requirements in the third year of operation will be 613 Mcf, and its annual requirements in that year, 47,959 Mcf.

In Docket No. G-8676, applicant City of McLeansboro, Illinois, proposes to construct and operate a distribution system in McLeansboro and the adjacent urban area, and a lateral line approximately five miles in length which would interconnect its system and Trunkline's pipeline system. The estimated cost of the project is $405,000, to be financed by the issue and sale of gas revenue bonds. The population of McLeansboro is approximately 3,200. This applicant estimates that its peak-day requirements in the third year of operation will be 1,549 Mcf, and its annual requirements in such year, 203,658 Mcf.

In Docket No. G-8677, applicant City of Vienna, Illinois, proposes to construct and operate a distribution system in Vienna; and a lateral line, slightly less than a mile in length, which would interconnect its system and Trunkline's pipeline system. The estimated cost of the project is $115,000, to be financed by the issue and sale of gas revenue bonds. The population of Vienna is approximately 1,250. This applicant estimates that its peak-day requirements in the third year of operation will be 517 Mcf, and its annual requirements in such year, 67,073 Mcf.

In Docket No. G-3159, applicant Town Gas Co. of Illinois (Town Gas), a recently organized corporation, proposes to conduct business in two divisions, a Town Division and a Farm Tap Division. The Town Division only is the subject of Docket No. G-3159. In this Division, Town Gas pro-

poses to supply natural-gas utility service in Virden, Girard and Thayer, Illinois, and the environs of each. The population of these communities is approximately 5,650. Applicant proposes to install and operate a lateral pipeline commencing at a point of connection with Panhandle's main pipeline system near Auburn Illinois, and extending southwardly for a distance of 11.2 miles, to terminate at Girard. Applicant proposes to install and operate distribution systems in the three communities. The estimated cost of the project is $416,747. Town Gas will finance its total initial capital requirement, estimated at $525,000 for both Town and Farm Tap Divisions, by the issue and sale of $275,000 principal amount of first mortgage sinking fund bonds having a 25-year maturity, $75,000 of preferred stock and $175,000 of common stock. The estimated Town Division peak-day requirements in the third year of operation are 778 Mcf, and the estimated annual requirements in that year, 90,167 Mcf.

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The Commission's determinations. Section 7(a) provides that the Commission may, if it "finds such action necessary or desirable in the public interest," direct a natural-gas company to establish physical connection and sell natural gas to "any person or municipality engaged or legally authorized to engage in the local distribution of natural or artificial gas to the public, "if the Commission finds that no undue burden will be placed upon such natural-gas company thereby provided that such action would not impair the ability of the natural-gas company to render adequate service to its customers. The criteria to be applied under Section 7(a)'s prescription of "necessary or desirable in the public interest" include whether the pipeline company is the applicant's most feasible source of supply; whether there is a public need for, and will be a public benefit from, natural-gas service in the areas involved;

whether the proposed project can be financed; and whether the project is economically feasible.

With respect to the 12 applicants enumerated above the evidence establishes that these requirements of Section 7(a) of the Act are met. Certain of these requirements can be disposed of briefly, without particular reference to individual applicants. In all of these proceedings, the facts establish that each of these applicants is now engaged or legally authorized to engage in the local distribution of natural or artificial gas to the public. Likewise the evidence establishes that Panhandle or Trunkline, as the case may be, is the most feasible source of natural gas for the applicants. The evidence further establishes that there is a public need for and that there will be a public benefit from, public utility natural gas service in the cities, towns and villages which the applicants propose to serve. This need and benefit arise from the facts, among others, that all of the communities in question are without natural gas service; that natural gas is a clean, convenient and efficient fuel; that at the current prices of competing fuels, except that of coal in most instances, natural gas will afford a saving to the consumer, and generally will be attractive as compared with coal; and that other municipalities in the same general areas have natural-gas service, so that the communities in question may be placed at a disadvantage in attracting new residents and small industries.

Respecting the questions of financial and economic feasibility, as to which some fuller discussion is justified, the projects of Missouri Public Service and Central Illinois Electric and Gas may be considered separately from the projects of the remainder of applicants whose financing involves gas revenue bonds or sinking fund bonds.

As to Missouri Public Service, Docket No. G-2057, the evidence justifies the conclusion that its North Central Missouri Project can be financed. The record shows that

Missouri Public Service has a favorable capital structure and record of earnings and dividends. The

depreciated utility plant for 1955 was estimated by the company as $38,738,217. The total outstanding securities of the company, in the amount of $27,304,041, are in the ratio of 56% debt, and 44% equity. The total operating revenues for 1955 were estimated as $10,249,603. The present dividend rate on the common stock is $1.80 per share. The company proposes to increase the rate to $2.00 in 1956, and to $2.40 in 1960. The record further shows that said applicant has a history of ability to obtain money through mortgage bonds, debentures and preferred and common stock. Also, the company's statement of anticipated cash flow indicates that the financing of the project is feasible. Letters from insurance companies and financial houses in evidence express interest in the proposed financing program.

Respecting economic feasibility, it appears that Missouri Public Service's estimate of the third-year-of-operation peak day requirements of 18,208 Mcf for its North Central Missouri Project is excessive. However, the estimate includes substantial "small industrial" sales in the interruptible category, which would be curtailable on a peak day and hence should not enter into a peak-day allocation, and is subject to other infirmities. Panhandle has entered into a contract with Missouri Public Service which provides for a contract demand of 11,000 Mcf for the first winter of operation. The Examiner considered that the volume allocated to Missouri Public Service should be 11,000 Mcf and we find that substantial evidence supports this conclusion which we adopt.

Missouri Public Service estimates that the rate of return on the North Central Missou.. Project based on an 11,000 Mcf allocation will, in the first year of operation, be 1.42%.

By this estimate, the revenue from the project will be sufficient for the operating expenses of the project and partial service on the debt related thereto. The testimony discloses that Missouri Public Service is willing to accept the fact that the project will not be fully self sustaining in the initial years. Furthermore, an existing public utility of the size and financial soundness of Missouri Public Service is in a far different position from most of the other Section 7(a) applicants in these proceedings. Missouri Public Service does not require the firm assurance of gas supplies beyond the initial year of operation, or the assurance of the project's economic feasibility, in order to enable it either readily to finance at low interest rates or to weather periods of low return, since the major portion of the existant and proposed future properties of the company consists of electric properties.

Judging from the company's operating income in the past, as contained in the record, there will continue to be an adequate system rate of return. The bonds to be issued under the financing contemplated

will be general obligation bonds, covering practically all of the company's properties. With regard to the interests involved other than bondholders, there is no reason to think that the project, once it has been installed, will be abandoned. Finally, it is a responsibility of the Public Service commission of the State of Missouri to determine whether the North Central Missouri Project should be authorized when the result will be that a portion of the return from the company's other operations must offset any low return on such project, and the Missouri Commission has granted a certificate of convenience and necessity for the construction and operation of the project. We conclude that the application of Missouri Public Service

to this Commission should be granted provided the volume of gas allocated to the company is limited to 11,000 Mcf.

As to the financial and economic feasibility of the Central Illinois project, Docket No. G-8428, which would be financed from funds on hand, the estimated cost of the Delavan distribution system contained in the engineering report on behalf of Central Illinois seems to be reasonable, and the estimated operating income conservative. If limited to an allocation of gas consisting of the estimated peak day requirements in the third year of operation, the project appears to be economically feasible. The evidence further shows that there is a need for the increased allocation of gas which Central Illinois requests for Lincoln.

Turning to the question of the financial and economic feasibility of those applicants which propose to finance by means of revenue bonds, the Presiding Examiner concluded that where financing is to be accomplished by this means, the debt service coverage affords "the most practicable and perhaps the best gauge of the financial and economic feasibility of the project," subject to certain qualifications and safeguards. Because of the heavy reliance the Examiner placed on this factor, it is appropriate to set forth his views somewhat at length. He concluded that where the debt-service coverage is adequate, the economic potential of the project permits latitude in operation between that estimated and that actually experienced, without placing the project in critical economic jeopardy. In his view, the coverage affords a safeguard against such contingencies as over-estimation of revenues; under-estimation of cost of construction and operation expenses; emergences; untimely exhaustion of gas supply; and in a measure, increases in the wholesale price of gas. He emphasized, however, that the coverage ratio is of value only to the extent that the engineering report upon which it is based is reasonable, sound and reliable.

The Presiding Examiner pointed out further that the debt-service coverage ratio varies with the length of the maturity

schedule of the bond issue. He considered that in the cases of the projects to be supplied by the Panhandle system, the maturity schedules, on the one hand, should not necessarily be limited to the 20-year period upon which Panhandle specifically based its gas supply showing; and, on the other hand, should not be extended beyond a period of 30 years. And he concluded that where the maturity schedule of a gas revenue bond issue is 30 years, and where the engineering estimates are reasonably reliable, the minimum debt-service coverage in order for the project to be considered economically feasible is in the range of from 1.6 to 1.7. However, he concluded that where the gas supply warrants a 30-year amortization schedule, and where, as here, the allotments of gas will be limited to the peak-day estimates in the third year of operation, the minimum coverage may reasonably be reduced to 1.5. It was pointed out that the risk of want of a market for such volume of gas is less than the risk of want of a market for the estimated volume in, say the fifth year of operation.

In the cases of the projects to be supplied by the Trunkline system in question here—City of McLeansboro and City of Vienna—the Examiner concluded that the maturity schedules of the bond issue should not exceed 20 years, because of a shortage in availability of Trunkline gas. Limiting the allotment of gas to the estimated peak-day volumes required for the third year of operation, he concluded that the minimum debt-service coverage, if the propects are to be deemed economically feasible, should be 1.5.

In addition to the factor of debt-service coverage the Presiding Examiner recognized that other factors are to

be taken into account in the case of a municipal enterprise, including the general character of the community, its credit standing and freedom from default on previous bond issues, and the experience of the municipality in the operation of other utilities. He found that in all of these respects, the showing of each of the applicants here in question was satisfactory. He adverted to still other factors testified to by witnesses as bearing upon the feasibility of a municipal gas distribution project, such as distance of the municipality from the interstate pipeline, and the consequent cost of the connection, and population.

We consider that, in the circumstances of this case and with respect to the 12 Section 7(a) applicants here in question, the approach followed by the Presiding Examiner, as described in the foregoing, is reasonable and appropriate. The questions whether the factor of debt-service coverage should be given the weight the Presiding Examiner apparently accorded it here, and whether the coverage ratios and amortization schedules determined upon should or should not be the same in other cases, must depend upon the facts of such other cases.

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By the engineering estimates, and based upon a 30-year maturity schedule for the bond issues and a third year allocation of gas, the debt-service coverages for the following projects to be served by the Panhandle system are as follows:

Project	Debt-Service Coverage
City of Montgomery, Mo. (Docket No. G-2932)	2.13
Village of Westville, Ill. (Docket No. G-4666)	1.80
Village of Pleasant Hill, Ill. (Docket No. G-4940)	2.01
City of Waverly, Ill. (Docket No. G-5139)	1.96
Village of Rossville, Ill. (Docket No. G-5979)	2.82
City of Winchester, Ill. (Docket No. G-8431)	1.51

It will be seen that all of these bond coverages exceed 1.5.

In the cases of Montgomery, Westville and Rossville, generally speaking the engineering reports from which the coverages are derived appear fairly and reasonably to reflect the economic and physical capabilities, and the requirements, of the communities, as well as the projected operation of the projects. We find that the coverages, along with the other facts of the case, are such as to indicate that the projects are economically feasible. Although in the instances of Pleasant Hill, Waverly and Winchester, the engineering reports are perhaps too optimistic in certain respects, specifically in the rates of space-heating customer attachment, taken as a whole, the evidence relating to each of these projects is sufficiently persuasive to lead to the conclusion that their economic success is probable.

We find also that the Missouri Central project, Docket No. G-4611, to be served by Panhandle, appears economically feasible. It has been seen that the bonds involved are 20-year revenue bonds, payable from a sinking fund; and that a limited amount of stock and 15-year debentures are also to be issued. Here again, the estimates of income in the engineering report seem conservative, and the estimates of costs and expenses appear sound.

The Town Gas project, Docket No. G-3139, to be served by Panhandle, likewise appears to be economically feasible. It has been noted that the bonds involved are sinking fund bonds, maturing in 25 years, and that the financing will include the issue and sale of stock. On the basis of the gross income estimates in the engineering report, a 28-year period will elapse before all of the bonds are retired. However, the bond interest coverage is substantial, being 2.98 times based on a third heating season allocation of gas. The engineering report appears sound, and the estimates of income appear conservative.

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Turning to the projects to be served by the Trunkline system, by the engineering estimates, and based upon a 20-

year maturity schedule for the bond issues and a third-year allocation of gas, the debt service coverages for City of McLeansboro, Illinois, Docket No. G-8676, and City of Vienna, Illinois, Docket No. G-8677, are 2.35 and 2.74, respectively. These bond coverages are well above the minimum of 1.5, and the engineering estimates seem to be reasonably sound. Bond ordinances of the two municipalities will provide for a mandatory call and prepayment of bonds from surplus revenues; so that, if the earnings projections are realized, the bonds will be retired at the expiration of 20 years. On consideration of these and the other facts in the record, the projects thus appear to be economically feasible and we so find.[1]

The evidence of record herein justifies the conclusion than an order requiring Panhandle to render service as herein specified to the Section 7(a) applicants already enumerated, will place no undue burden upon Panhandle. Nor will Panhandle be required to enlarge its transportation facilities for such purpose. Nor will Panhandle's ability to render adequate service to its present customers be impaired.

The evidence likewise justifies the conclusion that an order requiring Trunkline to render service, as hereinafter specified, to the Section 7(a) applicants seeking service from it whose applications are hereinafter granted, will not place an undue burden upon Trunkline, or require Trunkline to enlarge its transportation facilities for such purpose, or impair its ability to render adequate service to its customers.

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[1] Of course, these findings do not constitute an endorsement of the foregoing projects, nor is endorsement given to any estimates, fees, or projected method or manner of operation contained in the engineering reports or shown by the testimony. Investors in the securities to be issued must exercise their own judgment upon these questions. As we stated *In re Carolina Natural Gas Corp.*, 10 F. P. C. at page 515, "the Commission can assume no responsibility to potential buyers of securities with respect to the success or failure of a [local] distribution system."

The Commission further *finds:*

(1) It is necessary and desirable in the public interest that the proceedings respecting the 12 Section 7-(a) applicants hereinbefore enumerated, namely, Missouri Public Service Company, Docket No. G-2057; City of Montgomery, Missouri, Docket No. G-2932; Town Gas Company of Illinois, Docket No. G-3159; Missouri Central Natural Gas Company, Docket No. 4611; Village of Westville, Illinois, Docket No. G-4666; Village of Pleasant Hill, Illinois, Docket No. G-4940; City of Waverly, Illinois, Docket No. G-5139; Village of Rossville, Illinois, Docket No. G-5957; Central Illinois Electric and Gas Company, Docket No. G-8428; City of Winchester, Illinois,

Docket No. G-8431; City of McLeansboro, Illinois, Docket No. G-8676; and City of Vienna, Illinois, Docket No. G-8677, be severed from these consolidated proceedings and final decision on these applications be rendered forthwith.

(2) Panhandle Eastern Pipe Line Company, a Delaware corporation having its principal office in Kansas City, Missouri, is a "natural-gas company" within the meaning of the Natural Gas Act, as heretofore found by the Commission (4 F. P. C. 1081, 1083).

(3) Trunkline Gas Company, a Delaware corporation having its principal office in Houston, Texas, is a "natural-gas company" within the meaning of the Natural Gas Act, as heretoforef ound by the Commission (9 F. P. C. 721, 737).

(4) It is necessary and desirable in the public interest that the Commission by order direct Panhan-

dle to establish physical connection of its transportation facilities with those of each of the following applicants and direct the delivery and sale of natural gas by Panhandle to such applicants: Missouri Public Service Company; City of Montgomery, Missouri; Town Gas Company of Illinois; Missouri Central Natural Gas Company; Village of Westville, Illinois; Village of Pleasant Hill, Illinois; Village of Waverly, Illinois; Village of Rossville, Illinois; Central Illinois Electric and Gas Company; and City of Winchester, Illinois.

(5) Panhandle shall deliver and sell to each applicant its requirements of natural gas not to exceed the following stated amounts:

Applicant	Maximum Daily Requirement (Mcf)
Missouri Public Service Co.	11,000
City of Montgomery, Mo.	649
Town Gas Company of Illinois	895
Missouri Central Natural Gas Co.	1,391
Village of Westville, Ill.	1,039
Village of Pleasant Hill, Ill.	518
City of Waverly, Ill.	644
Village of Rossville, Ill.	643
Central Illinois Electric and Gas Co. (for City of Delavan, Ill.)	626
City of Winchester, Ill.	613

(6) It is necessary and desirable in the public interest that the Commission by order direct Trunkline to establish

physical connection of its transportation facilities with those of City of McLeansboro, Illinois, and City of Vienna, Illinois, and direct the delivery and sale by Panhandle to each applicant of its natural gas requirements not to exceed the following stated amounts:

Applicant	Maximum Daily Requirement (Mcf)
City of McLeansboro, Ill	1,549
City of Vienna, Ill.	517

(7) The above-named applicants are persons or municipalities engaged or legally authorized to engage in the local distribution of natural or artificial gas to the public.

(8) The requirement that Panhandle and Trunkline serve applicants, as set forth above, will not place an undue burden upon Panhandle or Trunkline, or impair their ability to render adequate service to their existing customers.

The Commission *orders:*

(A) The proceedings respecting the 12 Section 7(a) applicants enumerated in paragraph (1) above be and the same are hereby severed from these consolidated proceedings.

(B) Panhandle Eastern Pipe Line Company be and it is hereby directed to establish and maintain physical connection of its transportation facilities with the facilities to be constructed by applicants Missouri Public Service Company; City of Montgomery, Missouri; Town Gas Company of Illinois; Missouri Central Natural Gas Company; Village of Westville, Illinois; Village of Pleasant Hill, Illinois; City of Waverly, Illinois; Village of Rossville, Illinois; Central Illinois Electric and Gas Company and City of Winchester, Illinois; and to deliver and sell to said applicants through such connections their natural-gas requirements as hereinbefore set forth in volumes not to exceed the amounts set forth in paragraph (5) above.

(C) Panhandle shall report to the Commission in writing and under oath the date of commencement of

operations and service to the respective applicants enumerated in paragraph (B) above.

(D) Trunkline Gas Company be and it is hereby directed to establish and maintain physical connection of its transportation facilities with the facilities to be constructed by applicants City of McLeansboro, Illinois, and City of Vienna, Illinois, at appropriate points of interconnection, and to deliver and sell to said applicants through such connections their natural-gas requirements as hereinbefore set forth, in volumes not to exceed the amounts set forth in paragrah (6) above.

(E) Trunkline shall report to the Commission in writing and under oath the date of commencement of operations and service to the applicants enumerated in paragraph (D) above.

(F) Unless the Section 7(a) applicants enumerated in paragraphs (B) and (D) above, within the period of one year from the date on which this order issues, shall have constructed and placed in operation their respective projects to the extent of being able to receive service from Panhandle or Trunkline as the case may be, unless otherwise shown for good cause, said paragraphs (B) and (D) shall have no force or effect as to such applicants who have failed, within such period of time, so to construct and place in operation their projects.

By the Commission.

LEON M. FUQUAY,
Secretary.

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UNITED STATES OF AMERICA
FEDERAL POWER COMMISSION

Before Commissioners: Jerome K. Kuykendall, Chairman; Seaborn L. Digby, Frederick Stueck and William R. Connole.

IN THE MATTERS OF

Docket Nos. G-1705, G-1937, G-2433, G-2475 and G-8665

PANHANDLE EASTERN PIPE LINE COMPANY

Docket No. G-8471

VILLAGE OF FRANKLIN, ILLINOIS

Docket No. G-8526

CITY OF HICKMAN, KENTUCKY

Docket No. G-8664

TRUNKLINE GAS COMPANY

Docket No. G-8771

CITY OF CLINTON, KENTUCKY

Docket No. G-8888

CITY OF LACENTER, KENTUCKY

Docket No. G-8939

CITY OF BARDWELL, KENTUCKY

Docket No. G-8962

CITY OF WICKLIFFE, KENTUCKY

Docket No. G-8963

LAKE COUNTY UTILITY DISTRICT

Opinion No. 292

OPINION AND ORDER ISSUING CERTIFICATES OF PUBLIC CONVENIENCE AND NECESSITY UNDER SECTION 7(E), AUTHORIZING EXPORTATION OF NATURAL GAS UNDER SECTION 3 AND DENYING APPLICATIONS UNDER SECTION 7(A) OF THE ACT

(Issued June 30, 1956)

INTRODUCTION

These consolidated proceedings, which arose on applications by Panhandle Eastern Pipe Line Company (Panhandle) and Trunkline Gas Company (Trunkline) for certificates of public convenience and necessity under Section 7(e) of the Natural Gas Act (Act), are before us on exceptions to the Initial Decision of the Presiding Examiner issued March 6, 1956. Oral argument before the Commission was had on these matters on May 4, 1956. These several dockets present for decision six principle issues: (1) in Panhandle's Docket Nos. G-1705, G-1937, G-2433 and G-8665, and in Trunkline's Docket No. G-8664, whether the public convenience and necessity require the certificate authorizations therein sought, the controversy with respect to this issue being limited largely to the question of Panhandle's and Trunkline's gas supply; (2) in Panhandle's Docket No. G-1937, the proper disposition of a question of whether Panhandle has engaged in discrimination, an issue heard only in part by the Presiding Examiner, and respecting which he decided he lacked authority under the Administrative Procedure Act to pass upon; (3) in Panhandle's Docket No. G-2433, whether a certificate of

public convenience and necessity is required under Section 7(e) of the Act for certain so-called repiping facilities and operational improvements already effected by Panhandle;

(4). also in Panhandle's Docket No. G-2433, whether Panhandle has engaged in discriminatory practices with respect to two of its present customers, being served from the "Liberty Lateral," as compared to the service being rendered other customers from other laterals; (5) in Panhandle's Docket No. G-2475, whether the requested authorization under Section 3 sought by that company to export certain additional volumes of natural gas to Canada for sale to its present customer Union Gas Company of Canada, Ltd., should be granted; and (6) whether seven applications under Section 7(a) of the Act heretofore undisposed of, requesting that we direct Panhandle or Trunkline, as the case may be, to connect their facilities with those of applicants and sell to the latter certain volumes of natural gas, should be granted.

STATEMENT OF FACTS AND ISSUES

Panhandle, a "natural-gas company" under the Act, owns and operates a natural-gas pipeline system extending from the Hugoton and Panhandle fields in Texas through Texas, Oklahoma, Kansas, Missouri, Illinois, Ohio and Michigan. Trunkline, also a "natural-gas company," is a subsidiary of Panhandle, the latter corporation owning 96.8% of its common stock. Trunkline owns and operates a natural-gas pipeline system extending from the Rio Grande area of Texas along the Gulf Coast and through Louisiana, Arkansas, Mississippi, Tennessee, Kentucky and Illinois to a point near Tuscola, Illinois, where it connects with the Panhandle system.

Docket No. G-1705—Panhandle's application in Docket No. G-1705 was filed on June 11, 1951. By it, Panhandle requests authorization for the construction and operation of certain compressor units and loop lines, hereafter particularly described, increasing the maximum-day capacity of the company's main-line system from 550,000 Mcf to

600,000 Mcf. On August 14, 1951, the Commission granted temporary authorization for the construction and operation of such facilities. The facilities were constructed and placed in operation in 1951 and 1952.

The issue presented is whether public convenience and necessity require the permanent certification of the above facilities and operations.

Docket No. G-1937—On April 14, 1952, Panhandle filed an application in this docket (1) for a certificate of public convenience and necessity authorizing it to operate certain lateral pipelines constructed by Indiana Gas & Water Co., Inc. (Indiana Gas) paralleling existing lateral pipelines of Panhandle to Crawfordsville and Lebanon, Indiana; and (2) for authorization for the disposition by Panhandle to Indiana Gas of certain of Panhandle's facilities which lie "downstream" from now measuring and regulating stations at Crawfordsville and Lebanon. This matter was consolidated

with a related proceeding in Docket No. G-2023 involving charges of unlawful discrimination in service by Panhandle against Indiana Gas. A hearing was had in such consolidation proceedings in the fall of 1952.[1] In due course, an Examiner's initial decision was rendered whereby the certificate requested by Panhandle was issued, and authorization granted for the disposition of facilities to Indiana Gas. The Examiner also found that Panhandle had practiced unlawful discrimination against Indiana Gas, and was directed to take appropriate steps to eliminate the same. By order issued April 22, 1953, we affirmed the Examiner's decision with modifications. Subsequently we issued an order granting Panhandle's application for rehearing. Then there followed hearings in the instant

[1] These proceedings also involved Docket No. G-1813, which is not otherwise relevant here.

consolidated proceedings, culminating in the Examiner's decision now before us.

The Presiding Examiner determined in the decision before us that under the Administrative Procedure Act he had no authority to decide the issues presented in this docket since the Examiner who presided at the reception of the evidence at the earlier hearing was still available to decide this aspect of the case.

The issues presented in this docket are whether we should now decide the issues in this docket; whether we should grant the authorizations requested; and what action we should take, if any, in view of the earlier findings of discrimination by Panhandle against Indiana Gas.

Docket No. G-2433—Panhandle's application filed in this docket on May 18, 1954, is for a certificate of public convenience and necessity authorizing the construction and operation of facilities designed to increase its peak-day sales and deliverability by 455,000 Mcf per day, *i.e.*, from an estimated 970,000 Mcf per day to an estimated 1,425,000 Mcf per day. As a consequence of various amendments to its application in this docket, there are before us now requests for authorizations respecting four classes of facilities, more particularly described hereinafter:

(1) Loop-line facilities to effect an increase in Panhandle's daily sales capacity of 100,000 Mcf per day;

(2) Lateral pipeline facilities to enable Panhandle to deliver additional volumes of gas from its main pipeline to certain of its customers;

(3) The operation of "repiping facilities" installed in a number of Panhandle's main-line compressor stations, provided the Commission rules that a certificate is required for the operation of such facilities. Panhandle alleges that those improvements will increase the sales capacity of its main-line system by 45,000 Mcf per day, and that other so-called "operational improvements," effected by hydro-

static testing, will increase the sales capacity by an additional 35,000 Mcf per day;

(4) Proposed storage sales by Panhandle to The East Ohio Gas Co. and proposed increased storage sales to Michigan Gas Storage Co., hereinafter particularly referred to.

By its action on September 2, 1954, and its order issued December 22, 1954, the Commission granted temporary authorization for the construction and operation of the loop-line facilities constituting class (1) of the G-2433 facilities. The construction was completed and such facilities placed in operation in December 1954.

The principal issues presented in this docket are first, whether the requirements of public convenience and necessity are met with respect to these requested authorizations, the controversy respecting this issue involving chiefly the matter of Panhandle's gas supply; second, respecting the authorizations designated in (2) above, whether Panhandle has engaged in discrimination against customers served by its Liberty Lateral and what steps, if any, may be taken to eliminate such discrimination if its exists; and third, with respect to (3) above, whether a certificate is required for certain of Panhandle's so-called "repiping facilities" and other operations.

Docket No. G-2475—Panhandle's application in this docket for the authorization to export gas to Canada was filed on July 2, 1954. The authorization sought is pursuant to the terms of a contract dated April 21, 1954, between Panhandle and Union Gas Company of Canada, Ltd., for the purchase and sale of an annual volume of gas up to 15,500,000 Mcf per year.

The principal issue presented is whether the facts require us to deny the proposed exportation on a finding in the language of Section 3 of the Act, that "the proposed

exportation . . . will not be consistent with the public interest," or whether it is consistent therewith and should be authorized. The controversy centers chiefly on the matter of gas supply.

Docket Nos. G-8664 and G-8665—On March 25, 1955, Trunkline filed its application in Docket No. G-8664 for a certificate of public convenience and necessity authorizing it to construct and operate main-line compressor stations, hereinafter particularly described, designed to raise its peak-day capacity by 85,000 Mcf, *i.e.*, from 290,000 Mcf to 375,000 Mcf; and to sell the additional capacity as hereinafter stated.

On the same date, March 25, 1955, Panhandle filed its application in Docket No. G-8665 for a certificate of public convenience and necessity authorizing it to construct and operate certain additional compressor capacity, hereinafter particularly described. The stated purpose of this capacity is to permit Panhandle to transport additional volumes in the amount of 80,000 Mcf per day which it proposes to purchase from Trunkline.

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On June 30, 1955, the Commission issued a temporary authorization in Docket No. G-8664 for Trunkline to construct the facilities involved in its application. On October 5, 1955, the Commission adopted an order whereby, pending final Commission decision, (1) a temporary certificate was issued to Trunkline for the operation of said facilities, and (2) a temporary certificate was issued to Panhandle for the construction of facilities and for the operation of its facilities as follows: (a) the operation of its facilities so as to permit the delivery of additional gas made possible by "repiping" and "operational improvements" on its system, which had by that date already been effected; (b) the delivery of natural gas for the period November 1, 1955 to November 30, 1955 in accordance with temporary

contract demands fixed by its order of December 22, 1954, and amended by its June 7, 1955 order in Docket No. G-1116, *et al.*; (c) the delivery of natural gas for the period from December 1, 1955 to March 31, 1956 in accordance with contracts Panhandle had negotiated with its customers and contract demands fixed by the Commission for certain customers with whom Panhandle had not negotiated contracts; and (d) the construction and operation of the lateral facilities heretofore referred to as class (2) of the facilities involved in the application in Docket No. G-2433. At the time of the conclusion of the hearing, the Trunkline facilities were in the course of construction, and stood to be completed by December 1, 1955.

The issue presented is whether the public convenience and necessity require the certificate authorizations requested in these dockets.

Section 7(a) Applications—The remainder of the proceedings, originally 19 in number, involve applications of seven companies and communities and a utility district, under Section 7(a) of the Act, for orders directing either Panhandle or Trunkline to connect its transportation facilities with facilities which the Section 7(a) applicants propose to construct, and to sell natural gas to them. Twelve of such applicants filed motions to sever and for immediate decision on their applications,[2] and by our order issued herein on May 18, 1956, we granted the motions to sever and rendered decision on these applications. The remaining seven, whose applications now are before us, consist of Village of Franklin, Illinois, Docket No. G-8471,

[2] These are Missouri Public Service Company, Docket No. G-2057; City of Montgomery, Missouri, Docket No. G-2932; Town Gas Company of Illinois, Docket No. G-3159; Missouri Central Natural Gas Company, Docket No. G-4611; Village of Westville, Illinois, Docket No. G-4666; Village of Pleasant Hill, Illinois, Docket No. G-4940; City of Waverly, Illinois, Docket No. G-5139; Village of Rossville, Illinois, Docket No. G-5979; Central Illinois Electric and Gas Co., Docket No. G-8428; City of Winchester, Illinois, Docket No. G-8431; City of McLeansboro, Illinois, Docket No. G-8676; and City of Vienna, Illinois, Docket No. G-8677.

seeking service from Panhandle; City of Hickman, Kentucky,

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Docket No. G-8526; City of Clinton, Kentucky, Docket No. G-8771; City of LaCenter, Kentucky, Docket No. G-8888; City of Bardswell, Kentucky, Docket No. G-8939; City of Wickliffe, Kentucky, Docket No. G-8962; and Lake County [Tennessee] Utility District, Docket No. G-8963, all seeking gas from Trunkline.

The issue presented is whether the applicants have met the requirements of Section 7(a) authorizing us to direct a natural-gas company to establish connections with and sell gas to qualified applicants.

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THE COMMISSION'S DETERMINATIONS

We shall consider the dockets in these consolidated cases in the order listed in the caption hereto, except that our determinations in Docket No. G-1937 will be deferred until after consideration of Docket No. G-2433 and the common issue of discrimination presented therein. Thus, we shall consider first the certification of Panhandle's facilities in Docket No. G-1705; second, the certification of Panhandle's facilities in Docket No. G-2433, and the other issues presented in that docket, which are (a) the necessity for a certificate for certain of Panhandle's "repiping facilities", and other operations, (b) the question of Panhandle's gas supply, and (c) the question of claimed discrimination against customers served by the Liberty Lateral; third, the question of claimed discrimination by Panhandle and the proper disposition of the issues presented in Docket No. G-1937; fourth, the question of the exportation of natural gas to Canada by Panhandle presented in Docket No. G-2475; fifth, the facilities sought by Trunkline and Panhandle in Docket Nos. G-8664 and G-8665, respectively;

and finally, the various Section 7(a) applications in the remaining dockets.

Docket No. G-1705—In this docket, Panhandle seeks a certificate for three compressor units, totaling 6,000 horsepower, and 32 miles of loop pipeline, costing $3,222,638. As mentioned, on August 14, 1951, we granted temporary authorization for the construction and operation of such facilities, which were built and placed in operation in 1951 and 1952. These facilities were financed from a portion of the proceedings from $20,000,000 in debentures issued by Panhandle in July of 1951. Since the installation of the facilities, the volume of gas related to the increased capacity resulting from them has been and will continue to be required to meet the demands of Panhandle's customers. As hereinafter shown in our discussion of Panhandle's gas supply problem under the heading, "Docket No. G-2433," Panhandle's gas supply is adequate to justify the permanent certification of these facilities. Thus the facts establish and we find that, with respect to these facilities, the requirements of public convenience and necessity are met.

Docket No. G-2433—The facilities involved in the authorizations sought by Panhandle in Docket No. G-2433 consist of:

(1) Twelve sections of main pipeline loops, totaling 294.6 miles, costing about $23,096,219.

(2) Ten separate lateral loop facilities designated and having an approximate cost as follows: Peoria [Illinois] Lateral, including 3 river crossings, $2,640,920; Clinton [Illinois] Lateral, $128,750; Anderson [Indiana] Lateral and Measuring and Regulating Station, $335,420; Fort Wayne [Indiana] Lateral,

$171,289; Kokomo-Tipton [Indiana] Lateral, $105,060; Greenfield [Indiana] Lateral, $87,550; Winchester

[Indiana] Lateral, $63,860; Arthur [Illinois] Lateral, $61,491; Villa Grove [Illinois] Lateral, $46,556; Michigan-West [Michigan] Lateral, $834,000; total cost, $4,474,896.

(3) So-called "repiping facilities" in a number of main-line compressor stations, to permit operation of Panhandle's system as three separate lines, costing $1,741,300. As previously stated, Panhandle requests a certificate covering these facilities only provided the Commission determines that such facilities are within the purview of Section 7(c) of the Act.

The facilities described in paragraphs (1) and (2) have been, or are being, constructed pursuant to temporary authorization.

Preliminary, before considering whether the elements of public convenience and necessity are satisfied in regard to the foregoing, we must, as to the facilities referred to in paragraph (3), determine whether they are subject to the certificate requirements of the Act. Panhandle, which has already installed these facilities without authorization, requests such authorization only if it is determined that they are.

Previous to the installation of these so-called "repiping facilities" in certain of the compressor stations, such compressor stations had only two sets of compressor engines and two suction headers and discharge headers, whereas three pipelines lead to and away from the stations. The construction in question was designed to provide for three independent streams of gas instead of two, and to effect the operation of the system at three discharge pressures. The construction consisted of adding another suction header and a discharge header, laying new yard lines, installing engine piping to connect the engines to the proper headers, and installing new compressor cylinders and compressor

equipment to handle higher pressures or greater volumes. By these additions and changes, Panhandle increased the capacity of its system by 45,000 Mcf per day.

We consider that a certificate of public convenience and necessity is required by Section 7(c) of the Act for the construction and operation of the new facilities described above. That section provides that no "natural-gas company" shall "undertake the construction or extension of any facilities" for "the transportation or sale of natural gas, subject to the jurisdiction of the Commission," or "operates any such facilities or extensions" without such a certificate. The word "extension" is nowhere defined in the Act; and nothing, either from the Act's legislative.

history or otherwise, is cited which justifies giving this word other than its usual and customary meaning. Webster's *New International Dictionary* defines "extension" as "Act of extending, or state of being extended; a stretching out; enlargement in breadth or continuation of length; increase; augmentation; expansion." The new facilities, enlarging as they do the previous facilities, and increasing as they do the incremental capacity of the system by 45,000 Mcf daily, are clearly "extensions" of facilities within the purview of Section 7(c).

Panhandle cites Section 2.55(a) of the Rules of Practice and Procedure as excluding the new facilities from the requirements of Section 7(c). But despite Panhandle's reference to its changes as being "repiping", a principal portion of the incremental capacity is the result of changes in compressor cylinders. These are an integral part of gas compressors which Section 2.55(a) specifically states are not to be excluded as facilities. It follows that certificate authorization is required for the construction and operation of these facilities.

The record shows that in addition to the increase resulting from the construction described above, Panhandle has been enabled to move additional volumes of gas through its pipeline facilities by operating its lines at higher pressures as the result of qualifying such lines for the high pressure operation through hydrostatic testing. The staff takes the position that a certificate authorization is required for these operations also. We are unable to agree. The practicalities of pipeline operation require that managerial discretion must be permitted a degree of latitude in fixing the pressures at which the various operations will be conducted. Further, we possess the power under the Act to approve or disapprove proposed sales and thereby to pass upon the employment of added capacity resulting from testing operations. This authority affords opportunity to insure that the effects of such operations, which if successful, obviously redound to the benefit of the consumer by making available increased volumes of gas without appreciable further investment, will not in other ways adversely affect the public interest.

Turning to the question of whether, with respect to the above-described facilities, the requirements of public convenience and necessity are satisfied herein, the matters of markets, financing, and economic feasibility can be disposed of briefly.[3]

As to markets, there are ready markets for the increased volumes of peak gas to be made available by the G-2433 facilities. The existence of the market is indicated or shown by service agreements between Panhandle

and its customers, in certain instances by evidence pre-

[3] As described above, the facilities in question have been constructed or are presently being constructed; and the requirement of engineering feasibility is met.

sented by customer companies, and by evidence presented by potential wholesale customers.

As to financing, with respect to the facilities for which authorization is sought in Docket No. G-2433, and also those involved in Docket No. G-8665, hereinafter considered, Panhandle's expansion program has been financed through the issuance of debentures and from cash on hand and funds generated through operations. In June 1954, Panhandle issued and sold $35,000,000 of debentures, to cover 1954 and 1955 construction. In 1954, approximately $23,000,000 of this sum was expended for the main loop pipeline construction, and about $7,000,000 for other construction. No further long-term financing will be required for the construction program in question.

As to economic feasibility, the record shows that Panhandle's customers are willing to purchase gas from it at the rates which Panhandle proposes to charge upon completion of the facilities, and which Panhandle claims are reasonable. Clearly, the projects are economically feasible.

Turning to the question of Panhandle's gas supply, the Examiner concluded that 9,339,164,000 Mcf constitutes a reasonable estimate of Panhandle's gas reserves as shown by the evidence and as pertinent to these proceedings, and that the company's "reserves are adequate for the market requirements involved in these proceedings." With these conclusions we agree, and accordingly we so find. The other facet of gas supply is that of deliverability or availability. In this regard the Examiner concluded that "the evidence leads to the conclusion that the availability of Panhandle gas is sufficient for such portion of the increased market requirements in the United States, resulting from utilization of Panhandle's expanded facilities . . . [as the Examiner determined should be authorized] as Panhandle

proposes to meet from this source." However, doubt on the part of the Examiner as to the availability in the future of gas from the Hugoton Field in the volumes required constituted a factor which lead him to deny Panhandle's application in Docket No. G-2475, treated elsewhere herein, for authority to export gas to Canada.

We are in agreement with the former of these conclusions respecting the availability of Panhandle gas to meet the company's market requirements in the United States. Panhandle's deliverability exhibit was designed to show the adequacy, on an annual basis during the 20-year period 1955-1974, of the availability of Panhandle gas which, together with Trunkline gas, is relied on to meet the customer requirements to be supplied by the Panhandle system as increased in capacity by the facilities which Panhandle seeks to have authorized in these proceedings. This exhibit and the other evidence of record support the conclusion and we find that from the standpoint of availability also, Panhandle's gas supply is adequate for the market requirements involved in these proceedings. It follows that for the reasons set forth in our discussion elsewhere of the exportation of gas proposed by Panhandle in Docket No. G-2475, we must reject the latter conclusion of the Examiner above-stated, that Panhandle's proposed exportation of gas should be denied.

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Turning to the matter of Panhandle's enlargement of lateral facilities proposed in Docket No. G-2433 as hereinbefore described, a controversial issue presented in this regard relates to claimed discrimination by Panhandle against certain of its utility customers, and the scope of our authority under the Act to take action in this proceeding with respect to such discrimination if it exists. As described earlier, Panhandle seeks authority to enlarge ten

laterals serving eighteen utility customers. The Central West Utility Company (Central West), an intervener in this proceeding and a customer served from another lateral called the Liberty Lateral, contends that Panhandle for a long time past has practiced unlawful discrimination against customers whom it serves from the Liberty Lateral, as compared to customers served by certain of its other laterals including the ten which Panhandle seeks authority to enlarge.

The Presiding Examiner found that Panhandle is granting an undue preference to the companies served by the said ten laterals, as compared to two companies, Central West and Gas Service Company, served by Panhandle from its Liberty Lateral, by maintaining an unreasonable difference in service and facilities between the former and the latter two. And the Examiner concluded we have the authority, in order to eliminate the discrimination he considered existed, to issue a certificate granting the proposed authorizations in Docket No. G-2433 including the proposed enlargement of the laterals, on the condition that Panhandle shall provide Central West with a service consisting of a contract demand of 12,000 Mcf, an increase of some 6,500 Mcf over its presently authorized peak-day deliveries, which volume the Examiner would require Panhandle to deliver to Central West's existing delivery point on the Liberty Lateral within a certain time. The requirement so imposed would necessitate Panhandle's enlarging the Liberty Lateral, under the proposal advanced by Central West and relied on in the Examiner's Decision, at a cost in excess of $600,000.

Panhandle attacks the Examiner's determinations on the grounds, *inter alia*, that under the Act as well as under judicial decisions, we lack the authority to impose such a requirement, and further, that the enlargement proposed would not be economically feasible. First with respect to

the question of our authority to impose the requirement, Panhandle contends that the effect of the Examiner's order would be to compel Panhandle to enlarge the Liberty Lateral; that this would violate Section 7(a) of the Act which declare that ". . . the Commission shall have no authority to compel the enlargement of transportation facilities . . ."; and that this lack of authority to compel the enlargement of facilities even to eliminate discrimination is confirmed by the decision of the Court of Appeals for the Third Circuit in *Panhandle Eastern Pipe Line Company* v. *Federal Power Commission*, 204 F. 2d 675.

We consider that the decision of the court in the *Panhandle* case cited above governs this case, and requires the reversal of the Examiner on this issue. The circumstances of that decision closely parallel the

circumstances of the present case. Both involve the same companies, the same lateral, and the same claimed discrimination; and the requirement we imposed in the earlier case was, in language and effect, practically identical to the requirement which the Examiner would impose here. In the earlier case the court held that we have no authority to compel the enlargement of transportation facilities even though the purpose is to eliminate discrimination; and that this prohibition extends to an order which, although it does not in so many words require a company to enlarge its facilities, in effect compels it to do so. As the court there said (p. 680):

> . . . it was beyond the power of the Commission to order Panhandle within 45 days to take steps to eliminate discrimination in the service between the customers on its Liberty lateral and those on its other laterals by enlarging the facilities of the Liberty lateral.

This holding is dispositive of the issue in this proceeding respecting the imposition of a requirement that Panhandle enlarge its facilities on the Liberty Lateral. Such a requirement is "beyond the power of the Commission."

Moreover, we consider that the *Panhandle* case cited above, and the instant one, are not materially distinguishable. In the instant case, it is true that the requirement would be imposed by a condition under Section 7(e)[4] of the Natural Gas Act rather than under Section 5. However, despite the method employed, the effect remains the same—the company would be compelled to enlarge its facilities, contrary to the express declaration of the court quoted above that to require such is "beyond the power of the Commission." To impose such a requirement would put us in the position of doing indirectly what we are forbidden to do directly. Familiar rules of law and our own regard for a proper observance of the limitations which Congress and the courts have placed upon our authority both restrain us from pursuing such a course.

These same reasons require us to reject the proposition that an order requiring the enlargement of facilities by way of a condition to a certificate authorization would be a permitted exercise of power, since the action taken by the company under such a condition would be "voluntary", not "mandatory". As we point out later, such a distinction is completely hollow in view of the fact that the condition in question would impose heavy economic pressures upon the company. Furthermore, a "choice" between the

grant of a certificate on condition that the company enlarge certain other transportation facilities, on pain of

[4] The pertinent part of Section 7(e) provides that:

The Commission shall have the power to attach to the issuance of the certificate and to the exercise of the rights granted thereunder such reasonable terms and conditions as the public convenience and necessity may require.

denial of the certificate authorization if the company refuses to acceed to the condition, cannot fairly be called "voluntary".

The rationale of the *Panhandle* case establishes that our lack of authority to compel the enlargement of facilities by means of a condition to a certificate does not turn upon any such narrow distinctions as the above. It hinges upon a consideration far more basic. The heart of the matter the court stated in the following language (p. 680):

> . . . In the light of Section 7(a) we are compelled to conclude that Congress meant to leave the question whether to employ additional capital in the enlargement of its pipeline facilities to the unfettered judgment of the stockholders and directors of each natural-gas company involved.

As the court's language establishes, there is a sphere wherein, under the Act, the judgment of the stockholders and directors of the company has free exercise, and the investment of capital for the purpose of enlarging pipeline facilities comes within that sphere. We can deny the proposed construction of facilities but except to the limited extent the Act permits, we cannot require a company to risk its capital in a venture which in the exercise of its officers' judgment, it considers unwise to undertake. But the effect of the condition imposed by the Examiner's decision would be to compel Panhandle to enlarge the Liberty Lateral. Indeed, that is its purpose. Thereby, we would tell Panhandle it may either enlarge all the laterals or none of them. And by specifying the volumes of gas which shall be delivered by the Liberty Lateral, we would not only require the investment of capital associated therewith but would define the extent of investment. Obviously, this would take decision on these matters, respecting which it is management's right and obligation to judge, out of management's hands.

Moreover, the imposition of a condition requiring the company to enlarge the lateral, rather than an express direction to do so, does not render the requirement any the less mandatory. Undeniably, the condition involves coercion which precludes the free exercise of managerial discretion. As the company puts it, "Either Panhandle must abandon hope of successfully investing to enlarge markets of its own choice, or Panhandle must submit to the obligation of enlarging its facilities to serve markets, which do not, in Panhandle's considered judgment, warrant the investment involved." We cannot but conclude that if Congress had intended that we have a power of such extent and possibly far-reaching impact, the grant of such authority would be confirmed by something more specific than the general and rather standardized "conditions" provision of Section 7(e).

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It has been argued that the standard of "public convenience and necessity" is sufficiently broad to permit the Commission to consider matters of discrimination in passing upon whether to grant a proposed authorization, although no judicial decisions have been cited which construe this phrase so broadly and we know of none. In any event, assuming that our authority were held to extend this far, it is logical to assume that the discrimination to be thus considered must be shown to have some reasonable connection or relationship to the particular certificate authorization proposed. And we cannot find that there is such a reasonable relationship or connection between the claimed discrimination on the Liberty Lateral and the proposal to enlarge the other ten laterals in this case.

In addition, the record in this case does not establish the economic feasibility of the project for the enlargement of the Liberty Lateral contended for by Central West and relied on by the Examiner. Central West put in evidence

a comparison of the estimated cost of the proposed new construction on the Liberty Lateral with that on the other laterals for which Panhandle seeks a certificate, to show that the cost of construction per Mcf of increased peak-day capacity on the Liberty Lateral compares favorably with that on the other laterals. But there was no study of markets, loads or revenues of the proposed enlargement, and the record is silent on such important matters as expenses, depreciation, return, taxes, and the other components of a cost of service. Accordingly, there was no way for appraising the economic feasibility of the enlargements on the basis of annual use or load factor. By reason of the above and other defects in the record we cannot conclude that the project for enlarging the Liberty Lateral has been shown to be economically feasible. Thus, even assuming we have the authority to require the enlargement of facilities—which we have already concluded we do not—we are unable to find, as the Act requires, that the proposed condition is a reasonable one, within the meaning of Section 7(e).

In carrying out our functions we must proceed within the limits the Act prescribes; and for the foregoing reasons we consider that we lack the authority to impose the condition the Examiner required, desirable though its purpose is. As hereinbefore found, the public convenience and necessity require the issuance of certificates for the enlargement of the ten laterals above described and as requested by Panhandle. No condition can lawfully be interposed requiring the enlargement of the Liberty Lateral. In view of the foregoing, no further discussion of the company's other contentions is necessary.

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Finally in Docket No. G-2433, in addition to the authorizations previously discussed, Panhandle seeks authorization to make increased sales to most of its customers. The

increased sales consist of (1) sales embodying increased contract demands which Panhandle has negotiated with numerous of its customers; and (2) storage sales to The East Ohio Gas Co. (East Ohio) and increased storage sales to Michigan Gas Storage Co. (Gas Storage). The sales to the latter two customers would be made under Panhandle's S-1 Rate Schedule, in annual contracted volumes of 6,000,000 Mcf to East Ohio; and an increase from 42,605,000 Mcf to 56,000,000 Mcf to Gas Storage.

By order issued October 5, 1955, in these proceedings, we granted a temporary certificate to Panhandle authorizing the delivery of natural gas in accordance with the contract demands which Panhandle had negotiated with numerous customers and certain contract demands which we had fixed for other customers with whom Panhandle had not negotiated contracts. Subsequent to the conclusion of the hearing, by order issued November 29, 1955, in these proceedings, we granted a temporary certificate to Panhandle for the operation of its facilities so as to deliver the aforementioned annual contracted volumes of gas to East Ohio and Gas Storage, pursuant to the S-1 Rate Schedule.

The Examiner concluded that Panhandle should be authorized to increase its firm contract demands as proposed, and also to make the storage sales to East Ohio and Gas Storage. We agree with those conclusions. As we have found elsewhere herein, there is a market for the volumes of gas represented by the contract demands. Respecting the storage sales, the fact that East Ohio and Gas Storage have contracted to purchase the annual volumes of 6,000,000 Mcf and 56,000,000 Mcf, respectively, is some evidence that there is a market and need for the gas on their systems. Moreover, East Ohio's need for the increased quantities of gas is confirmed by its having built, at a cost of $10,000,000, a pipeline to receive the deliveries. Gas Storage's need is similarly demonstrated by Panhandle's

having constructed, under temporary authorization, the Michigan West Lateral, at a cost of $834,000, on which lateral Gas Storage is the principal customer. We conclude that the requirements of public convenience and necessity have been met with respect to these proposed authorizations also.

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Docket No. G-1937—This docket involves an application filed by Panhandle in April 1952 for a certificate authorizing it to operate certain loops to its Crawfordsville and Lebanon Laterals, which loops were constructed by Indiana Gas; and further for authorization of the sale of certain facilities to Indiana Gas. A related proceeding, Docket No. G-2023, involved a complaint by Indiana Gas charging that Panhandle was practicing unlawful discrimination in service among customers by reason of failure to provide adequate lateral facilities to Crawfordsville and Lebanon. These two proceedings were consolidated for hearing,[5] and a hearing was had therein in the fall of 1952.

On February 7, 1953, the Examiner who presided at such hearing rendered an initial decision whereby, in Docket No. G-1937, the certificate and the authorization for sale of facilities requested by Panhandle were granted. Also, in Docket No. G-2023 the Examiner concluded that respecting the laterals, Panhandle had engaged in unlawful discrimination against Indiana Gas and the company was directed to take appropriate steps to eliminate such discrimination. By order issued April 22, 1953, the Commission affirmed such decision with modifications. Thereafter, the Court of Appeals for the Third Circuit issued its decision in *Panhandle Eastern Pipe Line Company* v. *Federal Power Commission*, 204 F. 2d 675 (C. A. 3, 1953), previously discussed in this opinion. Then, on motion by Panhandle,

[5] These proceedings also involved another docket, G-1813, which was previously dismissed.

the Commission, by order issued June 19, 1953, provided for rehearing in the consolidated dockets. By order issued November 2, 1954, Docket Nos. G-1937 and G-2023 were consolidated with such of the instant proceedings as were then pending.

On November 8, 1954, Indiana Gas filed a notice of withdrawal of its complaint against Panhandle, in which it recited that it had entered into a new service agreement with Panhandle calling for the delivery of additional volumes of natural gas to Indiana Gas and for increased delivery pressures at certain delivery points. For these and other reasons recited in the pleading, Indiana Gas requested that we enter an order permitting the withdrawal of the complaint against Panhandle. By order issued December 22, 1954, we permitted Indiana Gas to withdraw its aforesaid complaint. In that order we pointed out, however, that the record in the consolidated proceedings involving Docket Nos. G-1937 and G-2023, which "became a part of the consolidated proceedings in Docket No. G-1705, *et al.*, shall continue to be a part of such consolidated proceedings, both as it is involved in the rehearing of Docket No. G-1937, and as it pertains to our consideration and any ultimate action we may take on possible discriminatory aspects of Panhandle's over-all lateral policy." The matter now stands submitted for decision on the rehearing.

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Neither the staff nor Panhandle adduced any additional evidence relative to the application in Docket No. G-1937 or pertaining to the alleged discrimination involving the Crawfordsville and Lebanon Laterals, except that one of Panhandles witnesses was cross-examined by staff counsel to a limited extent relative to certain aspects of the claimed discrimination. The matter as it stands can be decided upon the record made at the original hearing in the consolidated proceedings, Docket No. G-1937, *et al.*, which pro-

ceedings were consolidated with the instant proceedings pursuant to the order quoted above.

The Presiding Examiner concluded in his March 6, 1956, decision that he was not authorized or empowered to make findings and conclusions on the basis of the record made before the Examiner who heard this aspect of these proceedings initially, by reason of the provisions of Section 5(c) of the Administrative Procedure Act.[6] The staff takes the position that regardless of this, we should now determine the issues in Docket No. G-1937. It argues that Panhandle has submitted in this rehearing no evidence contrary to that submitted in the Docket No. G-1813, *et al.*, proceedings, so that there is no basis for in any way altering or amending the finding of unlawful discrimination made in our order issued April 22, 1953, in Docket No. G-1813, *et al.* And it recommends that we affirm our order issued April 22, 1953, in Docket Nos. G-1813, G-1937, and G-2023 with respect to the issuance of a certificate of public convenience and necessity and the authorization for the sale of facilities in Docket No. G-1937, on the condition that Panhandle eliminate the discrimination in service found to exist against Indiana Gas by the acquisition of the loop portions of the laterals constructed by Indiana Gas or by appropriate rate adjustment.

Panhandle contends that the authorizations requested in Docket No. G-1937 for a certificate and for the sale of facilities should be granted, but contends that any issue of discrimination against Indiana Gas has been eliminated by Indiana Gas' withdrawal of its complaint in Docket No. G-2023, and that in any event, by our action granting Panhandle's application for rehearing, the issues in this case are now as if never tried and thus there are extant no

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[6] This section provides in part:

> The same officers who preside at the reception of evidence . . . shall make the recommended decision or initial decision . . . except where such officers become unavailable to the agency

findings on which to base further determinations absent further hearing. Also the company contends we have no authority to impose the proposed conditions.

We consider that the public interest requires that the issues presented in Docket No. G-1937 should be determined now. The record in these consolidated proceedings is adequate to permit this. Also, we consider that

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the evidence affords no basis for altering or amending the conclusions we reached in our order issued April 22, 1953 in Docket Nos. G-1813, G-1937 and G-2023, modifying and affirming as modified the initial decision of the Presiding Examiner, respecting the authorization in Docket No. G-1937 of Panhandle to operate the loops to the Crawfordsville and Lebanon Laterals, and the authorization of the sale of facilities to Indiana Gas as more fully described in that order. However, as shown above, Indiana Gas requested permission to withdraw its complaint alleging discrimination by Panhandle, reciting that the companies had entered into a new service agreement under which Indiana Gas receives additional volumes of gas and increased pressures at certain delivery points. Thus, the differences between the parties have been satisfactorily adjusted and the discrimination complained of has been eliminated, as further evidenced by the fact that Indiana Gas has withdrawn its complaint. Accordingly, under the existing circumstances, there is no occasion for the imposition of the condition recommended by the staff.

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Docket No. G-2475.—In this docket, Panhandle seeks authorization, under Section 3 of the Act, to export natural gas to Canada, pursuant to a contract dated April 21, 1954, between Panhandle and Union Gas Co. of Canada (Union). The natural gas proposed to be exported would be utilized

in connection with Union's storage program and would be resold for domestic, commercial and industrial processing uses in various communities in southwestern Ontario. The principal purpose of the project is to make natural gas available in the Hamilton, Ontario, market. No boiler fuel sales would be made with such gas.

Panhandle's contract is for a term of 20 years from the date of first delivery of gas thereunder. It provides for the sale by Panhandle to Union of volumes of gas as follows: during the first five years, annual volumes increasing progressively from a total of 10,500,000 Mcf to a total of 14,500,000 Mcf, there being a yearly increase of 1,000,000 Mcf; during the remaining 15 years, total annual volumes of 15,500,000 Mcf. The price of gas is 35¢ per Mcf, or 120% of the General Service rates fixed by the Commission for Panhandle in Michigan, whichever is higher. Approximately two-thirds of the respective annual volumes would be delivered during the seven summer months; and the remainder, during the five winter months. Of these amounts, Panhandle would be obligated to deliver the following percentages: during the summer months, not less than 92% of the scheduled volumes; during the winter months, not less than 88% of the scheduled volumes; on an annual basis, at least 90% of the annual volumes. The contract is to be terminated in the event equivalent volumes of gas become available to Union from a pipeline which may be constructed by Trans-Canada Pipe Lines, Ltd.

The Examiner concludued that the application should be denied, relying on what he considered to be a shortage in Trunkline's gas supply, the danger of future inadequate peak period gas availability of Panhandle's gas supply, the desirability of encouraging Panhandle to develop the Howell Field in Michigan as a storage reservoir, and an "adverse effect" of the exportation of this natural gas on the coal industry in this country.

However, we conclude that the facts and circumstances of this case, and the evidence of record, would not justify a finding, in the terms of Section 3, that "the proposed exportation . . . will not be consistent with the public interest." As to the matter of gas supply, it must be kept in mind, as we have frequently observed, that in passing on this question we must consider the matters of record concerning the past and present experience of an applicant in securing and enlarging its supply of natural gas, and the degree of reliability an applicant has demonstrated in meeting the requirements of its customers. Also relevant are, among other factors, the reserve situation generally in the area from which the applicant proposes to secure its gas supply, the demands on that area, as well as the availability of natural gas from all sources to the applicant. In regard to all these factors, the record provides substantial support for the proposed exportation of gas by Panhandle.

Considering first the matter of Trunkline's gas supply, a question we discuss at greater length elsewhere, the record establishes that the supply situation of Trunkline is not such as to require the disapproval of the proposed exportation. The Examiner placed considerable emphasis on the effect the exportation would have on Trunkline's reserves. However, the evidence establishes that Trunkline's reserve life index is adquate to meet such additional demands for natural gas as might be placed on that company by reason of the proposed exportation. Also relevant is the fact that Trunkline is favorable situated from the standpoint of adding reserves when needed, since over 500 miles of its transmission line pass through the heart of the gas producing regions of Texas and Louisiana. Likewise, we find that the gas supply of Panhandle, which is the party applicant herein, is such as to permit the export sale

proposed, without adversely affecting any public interest with which we are properly concerned. As we find elsewhere in this opinion, Panhandle's proven reserves are ample to meet all its market requirements for the projects it proposes, including the exportation in issue; and in view of the volumes of interruptible gas involved, denial of the increased export deliveries would not be a substantial benefit to Panhandle's resale customers in the United States.

The Examiner regarded "doubt as to the availability in the future of Hugoton Field gas in the volumes required, and to the extent such source of supply is relied upon in the deliverability study" as a "factor going to justify the denial" of Panhandle's application to export gas. Although the evidence was insufficient for the Examiner to make definitive findings as to the scope of Hugoton Field operations required to provide the gas necessary for Panhandle's proposed increased operations, he concluded that Panhandle's proposals call for rates of production from this field considerably in excess of those which have obtained in the past, and that tests have not been made to determine whether deterioration of wells would occur after continued operation at such high rates.

However, on consideration of the facts in this case, we conclude that these doubts and objections do not require denial of the export delivery or of any of the other authorizations Panhandle has requested. The Hugoton Field is only one of Panhandle's several sources of supply and even in that field it appears tha tthe high rates of production will not be reached until the last several years covered by Panhandle's deliverability study. And although that study calls for higher rates of production than in the past, testimony of improved techniques in well operations and remedial treatment warrant the conclusion that production can be raised and maintained at levels sufficiently high to meet the requirements of the markets

hereinafter authorized without detrimental effects on the majority of Panhandle's wells. Also, as mentioned above, Panhandle's contract with Union does not contemplate peak-period deliveries but specifiaclly provides for interruptions, and Panhandle may curtail deliveries at any time, subject only to meeting certain seasonal requirements.

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As to denying the export authorization Panhandle seeks in an attempt to stimulate the development of the Howell Field, in Michigan, as a gas storage project, we conclude that something more than the incomplete evidence presented by the present record is needed to justify such a course. Material evidence is lacking respecting geological matters, operational cost items and other factors which it is necessary to consider in deciding whether or not the Howell Field can or should be developed for storage.

Likewise, the evidence which was introduced to show that the proposed exportation would do injury to coal interests was of a very general nature, being statistical data with no evidence to relate it to the specific project proposed in this proceeding. This evidence is insufficient to show substantial injury to these interests. In any event this is but one factor to be considered in passing on the proposed authorization.

Michigan Consolidated, an intervener in these proceedings, excepts to the Examiner's refusal to require Panhandle to make deliveries of gas to Michigan Consolidated on an interruptible basis. Michigan Consolidated contends that it is willing to purchase gas from Panhandle pursuant to Panhandle's Interruptible Rate Schedule I-1, in the amount Panhandle proposes to export to Canada, and in greater volumes if available, for sale in a potential industrial market in the Detroit area; and that under the I schedule, Panhandle is required to offer such gas to Michi-

gan Consolidated as one of its customers in the United States. Accordingly, Michigan Consolidated contends that any certificates which may be issued to Panhandle herein should contain a condition requiring Panhandle to deliver and sell up to 100,000 Mcf of natural gas per day on an interruptible basis to Michigan Consolidated.

The Examiner found that Michigan Consolidated's industrial market referred to consists of the use of gas as boiler fuel in substitution for coal; and concluded that it is consistent with the public interest for natural gas to be exported to Canada for space-heating and other superior uses, rather than for the gas to be burned under boilers in this country when coal is available for such purpose. The Examiner relied also on the consideration that the gas proposed to be exported is high load factor gas, which during peak periods of demand could be devoted to meeting unsatisfied peak demands of Panhandle's existing firm wholesale customers. And he found that "the question of whether Panhandle should be required to supply interruptible gas to Michigan Consolidated is outside the scope of the issues presented in these proceedings."

As stated above, we are of the opinion that the record before us fails to show "that the proposed exportation . . . will not be consistent with the public interest." The considerations adverted to by the Examiner

have considerable weight. Separate and apart therefrom, however, other considerations require the rejection of Michigan Consolidated's arguments. Whatever the extent of our authority to require adherence by Panhandle to the terms of its I-1 ratio schedule,[7] the invocation of such authority would be purposeless and unjustified in the cir-

[7] *Cf. Panhandle Eastern Pipe Line Company* v. *Federal Power Commission*, Court of Appeals for the Third Circuit, No. 11,510, Opinion filed April 27, 1956.

cumstances of this case. For we must consider Michigan Consolidated's proposal for a condition to Panhandle's certificate issued herein in the light of Section 7(e)'s provision that we have the power to attach to a certificate "such reasonable terms and conditions as the public convenience and necessity may require." And we are unable to conclude on the record in this case that the condition Michigan Consolidated proposes is either reasonable or required by the public convenience and necessity. In the first place, we cannot find on this record that Michigan Consolidated has satisfactory markets for the volumes of gas it expresses a desire to purchase pursuant to the interruptible rate schedule. Of course, an essential ingredient of public convenience and necessity is adequate markets. The survey made by Michigan Consolidated of its interruptible markets was an abstract one in which the cost of other fuels appears to have been the primary concern, and possible customers were not even specifically approached as to their willingness to purchase the gas. Further, the only valid existing interruptible rate of Michigan Consolidated is 42 cents, a figure too high to permit the sale of the interruptible gas. At the same time the 35-cent per Mcf rate under which Michigan Consolidated contends that it would sell the interruptible gas does not give consideration to charges for transportation through the distribution facilities of Michigan Consolidated nor, more important, has it been considered or approved by the Michigan Public Service Commission. In addition, under the company's proposal, the gas sought by Michigan Consolidated would be used almost in its entirety for boiler fuel in displacement of coal, a matter which although not of decisive importance of itself, is deserving of consideration. Thus, separate and apart from the provisions of Section 3 governing export sales, and the circumstances surrounding Panhandle's proposal for the exportation of gas, we could not on the

record before us impose the condition which Michigan Consolidated seeks, requiring Panhandle to make the deliveries to it aforesaid.

In contrast, turning again to the question of the requirements of Section 3, the circumstances we have detailed show that Panhandle's proposal to export gas is not inconsistent with the public interest. There is no boiler fuel use proposed by Panhandle and thus we are not approving a type of use for export which we do not favor for domestic purposes. Additionally, the contract for export provides for curtailment of export deliveries when such gas is needed in the United States and such export will

measurably increase the over-all load factor of Panhandle. On balance, we find that the record in this case would not support a finding that the proposed exportation is inconsistent with the public interest. It is appropriate to observe that, in the language of the Examiner although in a somewhat different context, "it is consistent with the public interest for gas to be exported to our neighbor and ally, Canada"; and it is consistent also with the policies of cooperation and joint endeavor which have for so long characterized the relations of this nation and Canada not only in matters of defense, but also in matters relating to our respective economies, that the proposed increased deliveries to Union as requested by Panhandle be authorized.

We find, however, that as in certain other cases involving the exportation of gas, the public interest requires the imposition of a condition to this export authorization, providing that the authorization herein granted may be modified from time to time or terminated, after opportunity for hearing, upon further order of the Commission. This authorization shall not extend beyond the date of termination of the Presidential Permit relating to this exportation of gas.

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Docket No. G-8664—Trunkline seeks permanent certification in this docket for eight main-line compressor stations, totaling 56,700 horsepower and 24.36 miles of loop pipeline, costing about $17,686,000. At the time the hearing concluded, these facilities were being constructed under temporary authorization. Upon completion of the facilities, the designed capacity of the Trunkline system will be 375,000 Mcf per day, and increase of 85,000 Mcf over present capacity.

The evidence of record establishes that the various requirements of public convenience and necessity are satisfied, and accordingly, the authorizations requested by Trunkline in this docket should be granted. Respecting markets, Panhandle has entered into a service agreement with Trunkline for the purchase and sale of the increased volumes of gas which the G-8664 facilities will make available, less such volumes as the Commission authorizes and directs Trunkline to sell to others. The evidence shows that there is a market on the Panhandle system for the Trunkline gas which Panhandle will purchase.

As to financing, the record is clear that Trunkline has the ability to finance the project. Initial expenses in connection with the construction program were financed from funds in the company's hands. Interim financing of the amount needed prior to permanent financing was obtained through bank loans. At the time of the hearing, negotiations had been completed for the placement of $15,000,000 first mortgage pipeline bonds, comprising the permanent financing of the project. The bond indenture provides for the redemption of the bonds at any time for refunding purposes.

The requirement of economic feasibility also is satisfied. All but a very small portion of Trunkline's jurisdictional revenue is paid by Panhandle. Under Trunkline's tariff,

Panhandle reimburses Trunkline for its cost of service, less revenues collected by Trunkline from other customers. The gas will be delivered by Trunkline at Tuscola at such cost to Panhandle as to be readily salable.

Likewise, we conclude that Trunkline's gas supply is sufficient to justify the authorization sought in this docket. The Examiner concluded, as we do here, that there was a sufficient showing of gas supply to warrant the issuance to Trunkline of the permanent certificate it seeks, finding, among other things, that Trunkline's recoverable gas reserves under contract are reasonably estimated at 2,430,-714,000 Mcf. However, the Examiner considered that "deficiencies in field gas supply" are such as to necessitate the denial of Panhandle's application in Docket No. G-2475 for export deliveries. Panhandle's proposed increased export deliveries we consider in our discussion of that docket under a separate heading. It is sufficient for present purposes to note our disagreement with the Examiner in this particular, and our finding that the increased export deliveries have not been shown to be inconsistent with the public interest and accordingly should be authorized. Also in that discussion we set forth many of the considerations which lead us to conclude that Trunkline's gas supply justifies the authorizations it seeks in this proceeding, matters which need not be repeated here.

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Further in regard to Trunkline's gas supply, the Presiding Examiner found that on the basis of the company's estimate of the daily average gas volumes which will be available to it, Trunkline is confronted with a deficiency in gas supply some 12 years hence. And the Examiner objected further to the inclusion of so-called "spot purchases" in Panhandle's deliverability study on the grounds that they do not constitute "spot purchases" in the ordinary sense but are anticipated long-term contracts;

and that the assumptions surrounding them are such as to remove any record basis for their inclusion.

However, respecting this first objection, the record establishes the reasonable prospect that volumes of gas available to Trunkline in excess of its requirements during the first 12 years, as well as other supplies which may reasonably be expected to develop and become available, will meet the company's average daily requirements for at least another four years without any deficiency.

We agree, however, that the company's use of "'spot purchase' cycles" as a partial basis for its deliverability estimates is subject to serious criticism and we consider that in ordinary circumstances reliance upon such a showing could well result in failure to meet the standards of Section 7(c).[8] However, in the circumstances of this case we find that on balance, the requirements of public convenience and necessity are satisfied, and we are unable to conclude that the foregoing objection is such as to justify denial of the authorizations sought by Trunkline in this docket.

Docket No. G-8665—Panhandle seeks a certificate of public convenience and necessity in this docket for 16,000 horsepower in additional compression at Montezuma, Zionsville and Edgerton stations, costing about $3,714,000. The stated purpose of this additional compression is to permit Panhandle to increase deliveries to customers on the east end of the system, particularly on warm winter days and during the summer, so as to obtain maximum utilization of the increased volumes resulting from Trunkline's expansion program.

The evidence of record establishes that the requirements of public convenience and necessity are satisfied with respect to these facilities. We have hereinbefore determined in Docket No. G-2433 that the storage service de-

[8] As pointed out earlier, the showing involves not anticipated spot purchases in the ordinary sense, but anticipated long-term contracts!

livery of gas to East Ohio and Gas Storage should be authorized, and in Docket No. G-2475 that the export delivery of gas to Canada should be authorized. There is a present need for the additional horsepower facilities, or a great portion of them, to meet these sales. These considerations warrant the issuance of a certificate covering the facilities. The element of financing has been considered heretofore in our discussion of Docket No. G-2433. Panhandle's proposed rates, assuming authorization of these facilities, are at a level at which its customers

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are willing to purchase gas from it and thus the facilities are economically feasible. On March 16, 1956, Panhandle filed an application for a temporary certificate for the facilities involved in this docket. In view of our finding that a certificate should issue herein, that application for a temporary certificate should be denied.

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Remaining Section 7(a) Applicants—The foregoing disposes of all the dockets in these proceedings except those respecting the remaining seven Section 7(a) applicants, being the Village of Franklin, Illinois; cities of Hickman, Clinton, LaCenter, Bardwell, and Wickliffe, all in Kentucky; and the Lake County Utility District of Tennessee. As described earlier, pursuant to motions, the proceedings respecting twelve of the nineteen Section 7(a) applicants were severed for decision and decision was rendered thereon by our ordr issued May 18, 1956.

In that order, we set forth the criteria which must be met under Section 7(a) of the Act to support an order directing the establishment of connections and the sale of natural gas such as requested here, and that discussion need not be repeated extensively. However, respecting the necessary showing of financial and economic feasibility,

for purposes of this case, we followed the approach of the Presiding Examiner in his Initial Decision. Under that approach, with respect to financing by means of revenue bonds, we considered the debt service coverage ratio as a factor of considerable importance in evaluating financial and economic feasibility.[9] As regards projects to be supplied by the Panhandle system, we considered that, with a 30-year amortization schedule, with allotments of gas limited to the peak-day estimates in the third year of operation, and with reasonably reliable engineering estimates, a minimum debt-service coverage of 1.5 is reasonable. As regards projects to be supplied by Trunkline, we considered that, with a 20-year amortization schedule, with allotments of gas limited to third-year peak-day estimates, and with reliable engineering estimates, the minimum debt-service coverage, if the projects are to be deemed economically feasible, should be 1.5.

Tested against the criteria set forth in our order issued May 18, 1956, the record discloses that the seven Section 7(a) applicants enumerated above have fallen short of making a showing which would justify an order directing Panhandle or Trunkline to establish connections and sell them gas. Applicants' showings are defective primarily by reason of a failure to make an adequate showing of economic feasibility, which in turn is based largely on a lack of satisfactory engineering reports. The facts respecting the proposed projects of the individual applicants, which are set forth in the Examiner's decision, need not be detailed here. Nor need the particular objections to the applicant's presentations, which are fully detailed in the Examiner's decision.

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However, the Examiner concluded that respecting these Section 7(a) applicants (except Village of Franklin), the

[9] Various other factors to be considered are also set forth in that May 18, 1956 order.

circumstances of this case warrants giving them opportunity to make a further showing of the economic and financial feasibility of their projects; and his decision provided for the conditioning of the certificate issued Trunkline on its reserving temporarily volumes of gas equivalent to the estimated third year peak day requirements of the applicant, pending further additional showing. And the decision further provided that applicants desiring such opportunity should so advise the Commission in writing. All seven of the Section 7(a) applicants, including the Village of Franklin, have done so. We agree with the Examiner as to the desirability of affording further opportunity not only to the six applicants enumerated by the Examiner, but to the Village of Franklin also. Our order will make provision for this.

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The Commission further *finds:*

(1) Panhandle Eastern Pipe Line Company, a Delaware corporation having its principal office in Kansas City, Missouri, is a "natural-gas company" within the meaning of the Natural Gas Act, as the Commission has heretofore found.

(2) Trunkline Gas Company, a Delaware corporation having its principal office in Houston, Texas, is a "natural-gas company" within the meaning of the Natural Gas Act, as the Commission has heretofore found.

(3) The facilities involved in Docket Nos. G-1705, G-2433, and G-8665, as hereinbefore more fully described, which Panhandle proposes to construct and operate or operate, and the facilities involved in Docket No. G-8664, which Trunkline proposes to construct and operate, are to be used in the transportation of natural gas in interstate com-

merce or the sale in interstate commerce of natural gas for resale, and the construction and operation thereof as hereinafter ordered and conditioned are subject to the requirements of subsections (c) and (e) of Section 7 of the Natural Gas Act.

(4) The facilities referred to in paragraph (3) above are adequate to render the service which Panhandle and Trunkline propose and which applicants are hereinafter authorized to provide.

(5) Panhandle and Trunkline are able and willing properly to do the acts and perform the services proposed and to conform to the provisions of the Natural Gas Act as amended, and the requirements, rules and regulations of the Commission thereunder.

(6) The construction, operation and sales for which Panhandle and Trunkline seek authorization in Docket Nos. G-1705, G-2433, G-8664 and G-8665, are required by the public convenience and necessity and certificates therefor should be issued as hereinafter ordered and conditioned.

(7) It is in the public interest that Panhandle continue to serve its resale customers with volumes of gas equal to the winter contract demands approved by the Commission in Appendix A of its order of October 5, 1955, as corrected, during the winter months, unless modified in accordance with the provisions of the Natural Gas Act, and the Commission's Rules and Regulations; and that Panhandle serve, under the S-1 Rate Schedule, the volumes of storage gas which it proposes to sell to Michigan Gas Storage Co. and The East Ohio Gas Co., both existing customers of Panhandle.

(8) Respecting the authorization described in paragraph (7) for service to East Ohio, Panhandle's S-1 Rate Schedule is not presently applicable, on other than a temporary basis, to East Ohio. For the reasons set forth in our "Order modifying and amending condition attached to certificate of public convenience and necessity and permitting filing of tariff sheets and service agreement," issued in Docket No. G-9189 on September 6, 1955, the public convenience and necessity require that the condition attached to the certificate of public convenience and necessity issued to Panhandle on May 4, 1950, in Docket No. G-1317, 9 F.P.C. 721, 741, paragraph (N), and Rate Schedule S-1 of Panhnadle's FPC Gas Tariff, Original Volume No. 1, prescribed by the Commission's Opinion No. 241 and accompanying order (10 F.P.C. 185) as modified and amended by Opinion No. 214-A and accompanying order (10 F.P.C. 322) as further modified and amended by Opinion No. 274 and accompanying order issued July 28, 1954, should be further modified and amended so as to authorize Panhandle to deliver to East Ohio natural gas pursuant to Rate Schedule S-1 of Panhandle's FPC Gas Tariff, Original Volume No. 1, not in excess of 6,000,000 Mcf of natural gas annually.

(9) Trunkline should be authorized to sell and deliver to Panhandle a maximum daily volume up to but not exceeding 375,000 Mcf, the same being the maximum daily design delivery capacity of its system as proposed, less the existing contract demands on Trunkline other than those of Panhan-

dle, and less such volumes as hereinafter directed to be sold to others than Panhandle, and less any volumes reserved for applicants in the dockets referred to in finding (12), pending opportunity afforded them to make af urther showing in support of their applications.

(10) The provisions of our order issued April 22, 1953, in Docket Nos. G-1813, G-1937 and G-2023, modifying and affirming as modified the initial decision of the Presiding Examiner issued on February 27, 1953, of which order we granted rehearing on June 19, 1953, should be affirmed to the extent the aforesaid order affirmed the Examiner's decision (a) granting the application of Panhandle in Docket No. G-1937 for authority to abandon and dispose of to Indiana Gas certain facilities as set forth in paragraph (C) of the order in the Examiner's decision; and (b) issuing a certificate of public convenience and necessity to Panhandle, as set forth in paragraph (F) of the order in the Examiner's decision, as conditioned by paragraph (G) of the said order.

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(11) The exportation of natural gas to Canada proposed by Panhandle in Docket No. G-2475, consisting of the sale and delivery of increased volumes of gas to its existing customer Union Gas Company of Canada, Ltd., as described more fully in Panhandle's application, is consistent with the public interest under Section 3 of the Act, as hereinafter ordered and conditioned.

(12) It is in the public interest that the record be reopened to permit the Section 7(a) applicants in

Docket Nos. G-8471, G-8526, G-8771, G-8888, G-8939, G-8962, and G-8963 to present further evidence in support of the economic and financial feasibility of their respective projects.

(13) The public convenience and necessity require that the general terms and conditions set forth in paragraphs (a), (b), (c)(1), (c)(2), (c)(3), (c)(4), and (e) of Section 157.20 of the Commission's Rules and Regulations (18 CFR 157.20) should where pertinent attach to the certificates hereinafter issued to Panhandle and Trunkline, and to the exercise of the rights granted thereunder.

The Commission *orders:*

(A) A certificate of public convenience and necessity be and the same is hereby issued in Docket Nos. G-1705, G-2433 and G-8665 authorizing Panhandle Eastern Pipe Line Company to construct and operate or operate facilities presently involved in said proceedings, hereinbefore described and described more fully in its applications as amended and supplemented, for the transportation and sale of natural gas as therein set forth, upon the terms and conditions of this order. In view of the foregoing, the application for a temporary certificate filed by Panhandle in Docket No. G-8665 on March 16, 1956, should be and it is hereby denied.

(B) As conditions attached to the exercise of the rights granted to Panhandle by paragraph (A) above:

(i) Panhandle shall serve its resale customers with volumes of gas equal to the winter contract demands approved by the Commis-

sion in Appendix A of its order of October 5, 1955, as corrected, during the winter months, unless modified in accordance with the provisions of the Natural Gas Act, and the Commission's Rules and Regulations; and Panhandle shall serve, under the S-1 Rate Schedule, the volumes of storage gas which it proposes to sell to Michigan Gas Storage Co. and The East Ohio Gas Co.

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(ii) The facilities being authorized shall not be used for the transportation or sale of natural gas to any new customer except upon specific authorization of the Commission.

(C) A certificate of public convenience and necessity be and the same is hereby issued in Docket No. G-8664 authorizing Trunkline Gas Co. to construct and operate the facilities involved in said proceeding, hereinbefore described and more fully described in its application, for the transportation and sale of natural gas as therein set forth, upon the terms and conditions of this order.

(D) As conditions attached to the exercise of the rights granted to Trunkline by paragraph (C) above:

(i) Trunkline shall sell to Panhandle, under the applicable rate schedule, such volumes of gas as it transports in its system up to but not exceeding 375,000 Mcf per day, the same being the maximum daily design delivery capacity of its proposed system, less the existing authorized contract demands on Trunkline other than those of Panhan-

dle, and less such volumes as are hereinafter directed to be sold to others than Panhandle, and less any volumes reserved for the Section 7(a) applicants referred to in paragraph (ii) following.

(ii) Trunkline shall reserve from the delivery capacity of its gas system for the following Section 7(a) applicants, volumes of natural gas which shall not exceed the following, pending final order in the dockets involving said applicants:

	Mcf
City of Hickman, Ky.	1,087
City of Clinton, Ky.	474
City of LaCenter, Ky.	436
City of Bardwell, Ky.	459
City of Wickliffe, Ky.	549
Lake County Utility District	2,226

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(E) As further conditions attached to the exercise of the rights granted under the certificates issued to Panhnadle in paragraph (A) and Trunkline in paragraph (C) hereof:

(i) The certificates issued in paragraphs (A) and (C) hereof shall be accepted in writing and under oath, by a responsible official of the respective applicants, within 30 days from the issuance of this order.

(ii) Such of the facilities authorized in paragraphs (A) and (C) hereof as have not already been constructed and placed in operation under temporary authorization, shall be constructed and placed in actual

operation within 6 months from the date of issuance of this order.

(iii) The certificates issued herein are not transferable and shall be effective so long as the respective applicants continue the acts or operations hereby authorized in accordance with the provisions of the Natural Gas Act, and the applicable rules, regulations and orders of the Commission heretofore or hereafter issued.

(iv) The general terms and conditions set forth in paragraphs (a), (b), (c)(1), (c)(3), (c)(4), and (e) of Section 157.20 of the Commission's Rules of Practice and Procedure, shall attach to the issuance of the certificates granted in paragraphs (A) and (C).

(F) Rate Schedule S-1 of Panhnadle's FPC Gas Tariff, Original Volume No. 1; Paragraph (N) of the Commission's order issued May 4, 1950, *In the Matters of Panhandle Eastern Pipe Line Company, et al.*, Docket No. G-1317 (9 FPC 721, 741); Paragraph (A) of the Commission's order issued June 13, 1951, and Appendix A thereto, accompanying the Commission's Opinion No. 214 (10 PFC 185, 208-209, as modified and amended by order issued August 23, 1951, accompanying Opinion No. 214-A (10 FPC 322, 326), as further modified and amended by the Commission's order issued July 28, 1954 to accompanying Opinion No. 274; should be further modified and amended to authorize Panhandle to sell and deliver at The East Ohio Gas Company natural gas pursuant to Rate Schedule S-1 of Panhandle's FPC Gas Tar-

iff, Original Volume No. 1, not in excess of 6,000,000 Mcf of natural gas annually; and Panhandle shall file such amended tariff sheets within 30 days of the issuance of this order.

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(G) The Commission's order issued April 22, 1953, in Docket Nos. G-1813, G-1937, and G-2023, modifying and affirming as modified the initial decision of the Presiding Examiner issued on February 27, 1953, of which order we granted rehearing on June 19, 1953, be and it is hereby affirmed to the extent the aforesaid order affirmed the Examiner's decision (a) granting the application of Panhandle in Docket No. G-1937 for authority to abandon and dispose of to Indiana Gas certain facilities as set forth in paragraph (C) of the order in the Examiner's decision; and (b) issuing a certificate of public convenience and necessity to Panhandle, as set forth in paragraph (F) of the order in the Examiner's decision, as conditioned by paragraph (G) of the said order.

(H) Panhandle is hereby authorized, subject to the conditions specified herein, to export natural gas from the United States into the Dominion of Canada for sale and delivery to its present customer Union Gas Company of Canada, as hereinabove described and as more fully set forth in its application in Docket No. G-2475.

(I) The authorization to export natural gas granted under paragraph (H) hereof is subject to the following terms and conditions:

(i) Panhandle shall make, keep, and preserve full and complete records with respect to

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the natural gas herein authorized to be exported, and shall file with the Commission annual reports showing, by months, the quantities of gas exported during the preceding calendar year, together with the volumes exported on the peak day of each month and such other reports with respect to such exportation as the Commission may deem necessary and in such form and manner as the Commission may prescribe.

(ii) The authorization hereby granted may be modified from time to time or terminated, after opportunity for hearing, upon further order of the Commission, but in no event shall such authorization extend beyond termination of the Presidential Permit relating to this authorization.

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(iii) This authorization to export natural gas to Canada shall not be transferred in any manner whatsoever, but such authorization shall continue in effect for a reasonable time in the event of involuntary transfer of the facilities used thereunder by operation of law (including transfers to receivers, trustees, or purchasers under foreclosure or judicial sale) pending the making of an application for permanent authorization and decision thereon, provided notice is promptly given in writing to the Commission accompanied by a verified statement that the facts relating to sufficiency of supply, rates, and nature of

use remain substantially the same as before the transfer.

(iv) This authorization shall be effective only so long as Panhandle complies with the conditions of this order and continues the operations hereby authorized in accordance with the Natural Gas Act and all pertinent rules, regulations, or orders heretofore or hereafter issued by the Commission.

(v) Panhandle shall, within thirty (30) days of the issuance of this order, file an application to amend the Presidential Permit under which it is presently making existing export deliveries to Union Gas Company of Canada, to conform to the authorizations herein granted.

(J) The record in the proceedings involving Village of Franklin, Docket No. G-8471; City of Hickman, Kentucky, Docket No. G-8526; City of Clinton, Kentucky, Docket No. G-8771; City of LaCenter, Kentucky, Docket No. G-8888; City of Bardwell, Kentucky, Docket No. G-8939; City of Wickliffe, Kentucky, Docket No. G-8962; and Lake County Utility District, in Tennessee, Docket No. G-8963 is hereby reopened for the purpose of permitting these Section 7(a) applicants to present further evidence in support of the economic and financial feasibility of their respective projects.

By the Commission. Commissioner Connole concurring in part and dissenting in part.

LEON M. FUQUAY,
Secretary.

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IN THE MATTERS OF

Docket Nos. G-1705, G-1937, G-2433, G-2475 and G-8665

PANHANDLE EASTERN PIPE LINE COMPANY

Docket No. G-8471

VILLAGE OF FRANKLIN, ILLINOIS

Docket No. G-8526

CITY OF HICKMAN, KENTUCKY

Docket No. G-8664

TRUNKLINE GAS COMPANY

Docket No. G-8771

CITY OF CLINTON, KENTUCKY

Docket No. G-8888

CITY OF LACENTER, KENTUCKY

Docket No. G-8939

CITY OF BARDWELL, KENTUCKY

Docket No. G-8962

CITY OF WICKLIFFE, KENTUCKY

Docket No. G-8963

LAKE COUNTY UTILITY DISTRICT

(Issued: June 30, 1956)

CONNOLE, Commissioner, *dissenting:*

In this case, the Examiner, among other things, would provide for the issuance of a certificate of public convenience and necessity to Panhandle Eastern Pipe Line Com-

pany authorizing the enlargement of ten laterals on its system, on the condition that Panhandle take appropriate action to eliminate the discrimination in service found to exist on another lateral, Panhandle's Liberty Lateral, with respect to two customers, Central West Utility Company and Gas Service Company. The condition the Examiner imposed would require Panhandle to deliver increased volumes of gas to Central West, which would be accomplished by certain additions and improvements on the Liberty Lateral. The majority of the Commission has affirmed the issuance of the certificate. It has reversed the Examiner's action imposing the condition, without, however, determining that the discrimination found by the Examiner does not exist. The majority has stricken down the condition on three grounds: (1) that the Commission lacks the authority under the Natural Gas Act to condition the certificate issued Panhandle to require the enlargement of the lateral even to eliminate discrimination; (2) that Central West has not shown that the proposed project for the enlargement of the Liberty Lateral whereby the discrimination would be eliminated is economically feasible; and (3) that the condition imposed is not a reasonable one, as Section 7(e) of the Act requires. I am unable to agree with the majority on any of these three grounds, and accordingly must record my dissent to this aspect of the majority's decision in these proceedings.

As to the scope of the Commission's authority to impose the condition the Examiner would require, it is clear that, under the Natural Gas Act, in issuing a certificate of public convenience and necessity to Panhandle covering the facilities to increase the capacity of the ten lateral pipelines, the Commission has the power and authority to prescribe conditions designed to eliminate and prevent undue preference and prejudice, and unreasonable difference in service and facilities. Section 7(e) of the Act provides that a certificate can be issued only "if it is found . . . that the

proposed service, sale, operation, construction, extension or acquisition . . . is or will be required by the present or future convenience and necessity." And Section 7(e) of the Act provides that:

> The Commission shall have the power to attach to the issuance of the certificate and to the exercise of the rights granted thereunder such reasonable terms and conditions as the public convenience and necessity may require.

The above-quoted phrase "public convenience and necessity" is to be given a scope consistent with the purposes of the Natural Gas Act, *cf. Interstate Commerce Commission* v. *Railway Labor Executives Ass'n,* 315 U. S. 373, 376-377. The broad purpose of the Act was to provide "an agency for regulating the wholesale distribution to public service companies of natural gas moving interstate," *Illinois Natural Gas Co.* v. *Public Service Co.,* 314 U. S. 489, 506, and an important specific purpose was to prevent and to eliminate discrimination and prejudice, as evidenced by the very terms of the Act. See Sections 4 and 5.[1] However, under the Act, these sections are not the only instruments which the Commission may employ against discrimination. The standard of "public convenience and necessity" contained in Section 7 is sufficiently broad to empower us in issuing a certificate to consider, among other factors, the element of discrimination and the extent to which an authorization would promote or discourage discriminatory practices.

Thus it is clear that under these complimentary provisions of the Act, if the public convenience and necessity so

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[1] Section 4 (b) of the Act forbids a natural-gas company from subjecting any person to any undue preference or disadvantage and prohibits the maintenance of any unreasonable difference in service, facilities, or in other respects. And Section 5 (a) prescribes any unreasonable, unduly discriminatory, or preferential rule, regulation, classification or practice.

requires—and the Examiner found that it does, a finding not challenged by the majority—the Commission has the power and authority to attach to the certificate authorizations which Panhandle seeks the reasonable condition that Panhandle eliminate the undue preference and prejudice and unreasonable difference in service and facilities found to exist in respect to customers served by the Liberty Lateral by affording increased volumes of gas to meet the requirements of customers on the Liberty Lateral, and increasing the capacity of that lateral to that end.

Authority to deny a certificate unless Panhandle acts to eliminate the discrimination is also contained in still another provision of Section 7(e). Before a certificate may issue the Commission must find "that the applicant is . . . willing properly to do the acts and to perform the service proposed and to conform to the provisions of the Act . . ." Clearly, unless and until Panhandle eliminates the existing discrimination, we cannot find that the company is willing to conform to the provisions of the Act, and the certificate it seeks and which the majority grants should under the Act be denied.

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In support of its position of a lack of Commission authority, the majority relies chiefly upon the construction placed on the Act and particularly Section 7(a) thereof by the court in *Panhandle Eastern Pipe Line Company* v. *F.P.C.*, 204 F. 2d 675. There the court reversed the Commission's action directing Panhandle to eliminate discrimination by, in effect, increasing the capacity of its Liberty Lateral. The court held that under Section 7(a), the Commission may not order the enlargement of a company's transportation facilities, but that by that Section, Congress meant to leave the question whether to employ additional capital in the enlargement of its pipeline facilities to the judgment of the company's stockholders and directors.

But there are several fundamental distinctions between that case, which was an allocation proceeding under Section 5(a), and this case, which involves a certificate proceeding under Section 7(c), which establish that this decision is not controlling here. First and foremost, in passing upon whether to issue a certificate for proposed construction or operations under the Act, we are controlled by considerations of "public convenience and necessity." And in applying this standard, the effect which a proposed authorization may have as regards discrimination—whether it may permit it, discourage it, or prevent it—is indisputably a factor which we must consider. This is true by virtue of the certificate provisions of the Act and no other, even though other provisions of the Act explicitly outlaw discrimination. It follows that if the public convenience and necessity require the authorization of certain facilities, but only if the Commission also takes action designed to prevent discrimination which might come into being by reason of the authorization, or to eliminate discrimination which may already exist, we have the authority and duty to take such action as is reasonably related to those ends. And Section 7(c) by its provision quoted above respecting the imposition of conditions explicitly provides an appropriate means to the attainment of these ends.

It is no answer to say that the court has held that the Commission has no authority under another provision of the Act to require the enlargement of facilities because the decision whether or not to do so is one entrusted to management. The Commission has the affirmative duty to authorize construction and operations subject to its jurisdiction and this it can do only when the public convenience and necessity require. And nowhere does the majority's opinion face up to this fundamental and irrefutable fact. Thus, if management decides to build or operate facilities subject to Commission jurisdiction, it can do so only in

conformity with the standards Congress has seen fit to enact, and requires the Commission to administer, which standards include the requirement of nondiscriminatory service. Only then is the company able and willing "to conform to the provisions of the Act." And the decision, it will be noted, remains that of management.

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Thus there is no real conflict between the certificate provisions of the Act and the action the Examiner undertook thereunder, and the proviso of Section 7(a), as interpreted by the *Panhandle* decision, as appears further from the following. In the *Panhandle* case, the Commission in effect mandatorily ordered the company to enlarge its facilities. Here, the Examiner would not order Panhandle to enlarge the Liberty Lateral. Instead, the exercise of the rights under the other authorizations granted would be conditioned upon the company's enlarging the Liberty Lateral, for only in that way will these other authorizations meet the requirements of public convenience and necessity. Thus any construction that Panhandle may undertake, or any construction it may already have undertaken under any temporary authorization, is on its own volition, for a certificate is wholly permissive and in no sense mandatory. The same is true of a certificate conditioned to require the elimination of discrimination; it would merely withhold the authorization which Panhandle seeks unless and until the company affords nondiscriminatory service.[2]

Nor does the *Panhandle* case hold that the Commission is powerless to eliminate discription or that it may not put

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[2] As said in *Panhandle Eastern Pipe Line Co., Central West Utility Co., et al.*, Docket Nos. G-1116, G-1616, *et al.*, (Exmr.'s Dec. issued April 19, 1955, p. 13, affirmed by Commission):

> . . . this Commission cannot in these proceedings compel the construction of additional facilities by Panhandle. Whether the construction of such facilities should be made a condition of a certificate for other facilities, now or hereafter sought voluntarily by Panhandle, is another question.

a natural-gas company in the position of having to invest capital to eliminate discrimination. The court there notes that "The Commission is empowered under Section 5(a) to eliminate such undue discrimination as this by directing . . . that the maximum amounts of gas to be delivered to the contracting customers [on the other laterals] shall be reduced to the extent necessary to distribute the full capacity of the pipeline system fairly among all of Panhandle's customers"(204 F. 2d 675, 679). Such an order reducing the maximum amounts of gas to be delivered to contracting customers would in effect require the investment of capital by the company for the purpose of eliminating discrimination since it would require the company to use less than the full capacity of its pipeline system, thus restricting the return on capital already invested; yet the court did not consider this a prohibited transgression on management's prerogatives. No more is the condition the Examiner proposes here.

The foregoing is consistent with the interpretation the Commission has hitherto placed on the Act's provisions. See, *e.g.*, *In re Northern Natural Gas Co.*, Opinion No. 268, issued March 11, 1954, in Docket No. G-2063. There, Northern sought authorization to construct and operate certain additions to its main-line facilities, and certain lateral lines to serve particular adjacent communities. The Commission, in issuing a certificate, imposed a condition that Northern construct lateral lines to serve numerous specified communities, including a number of lines other than those which Northern had sought to have certificated, and which would extend to communities other than those which Northern had proposed to serve.

Furthermore, the Act is a remedial measure and should be construed to facilitate the attainment of its fundamental objectives, one of which is the elimination of the dis-

crimination. Even though it is possible to make arguments to the contrary, it is accordingly appropriate that where the existing law reasonably supports the proposition that we have the power to take action of the kind herein outlined to eliminate discrimination, we proceed in reliance on and act in accordance with the interpretation that we have the power until it is established beyond reasonable doubt that the authority is denied to us. And in equity the burden of seeking review should be placed not on the victim of the discrimination, as the majority by its action does, but on the perpetrator thereof.

As to the second ground the majority relies on, that the project for enabling the deliveries of increased volumes of gas on the Liberty Lateral is not shown to be economically feasible, there is no warrant or justification for requiring the party wronged to establish the "economic feasibility" of a project to eliminate discrimination, on pain of having to continue to endure the discrimination if it does not make such a showing. Properly, the burden should be on the guilty party to eliminate the discrimination by such appropriate and effective means as it can devise and the Act permits; and its failure to do so should not be reason for permitting it to continue its unlawful conduct. A reasonable course, particularly where, as here, the finding of discrimination still subsists, would be to reopen the record and require such further showing as is necessary to establish an appropriate and effective project that would eliminate the discrimination. In any event, assuming that a project adequate to eliminate discrimination would not yield the utmost in revenues Panhandle might desire, it is familiar utility law that the obligation to render service may entail a somewhat lower return on a given sale without affording valid grounds for objection so long as confiscation of the company's property does not result; and no claim of confiscation is made in this case.

Finally, the majority's conclusion that the condition the

Examiner would impose is not "reasonable," is clearly a makeweight, and requires little discussion. It cannot be seriously contended that a condition to a certificate, permitted by express statutory authorization, having the purpose of eliminating unlawful and prohibited conduct found to exist and

still in existence, anything but reasonable. For the foregoing reasons, I would affirm the provisions of the Examiner's order imposing the condition designed to eliminate the discrimination which exists on Panhandle's Liberty Lateral with respect to Central West Utility Company and Gas Storage Company.

WILLIAM R. CONNOLE,
Commissioner.

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UNITED STATES OF AMERICA
BEFORE THE FEDERAL POWER COMMISSION

IN THE MATTERS OF

Docket Nos. G-1705, G-1937, G-2433, G-2475 and G-8665

PANHANDLE EASTERN PIPE LINE COMPANY

Docket No. G-8471

VILLAGE OF FRANKLIN, ILLINOIS

Docket No. G-8526

CITY OF HICKMAN, KENTUCKY

Docket No. G-8664

TRUNKLINE GAS COMPANY

Docket No. G-8771

CITY OF CLINTON, KENTUCKY

Docket No. G-8888

CITY OF LACENTER, KENTUCKY

Docket No. G-8939

CITY OF BARDWELL, KENTUCKY

Docket No. G-8962

CITY OF WICKLIFFE, KENTUCKY

Docket No. G-8963

LAKE COUNTY UTILITY DISTRICT

Application of the Central West Utility Company for Rehearing of "Opinion and Order Issuing Certificates of Public Convenience and Necessity Under Section 7(e), Authorizing Exportation of Natural Gas Under Section 3 and Denying Applications Under Section 7(a) of the Natural Gas Act" and for a Stay

The Central West Utility Company (Central West), being aggrieved by the Commission's order issued herein on June 30, 1956, entitled "Opinion and Order Issuing Certificates of Public Convenience and Necessity Under Section 7(e), Authorizing Exportation of Natural Gas Under Section 3 and Denying Applications Under Section 7(a) of the Natural Gas Act" (Opinion No. 292), hereby files, pursuant to Section 19(a) of the Natural Gas Act and Section 1.34 of the Commission's Rules of Practice and Procedure, its appli-

cation for (1) a rehearing of that order and (2) a stay of such order pursuant to Section 19(c) of the Natural Gas Act in each instance, however, only in so far as said Opinion No. 292 orders the issuance of certificates for the enlargement of the ten laterals involved in Docket G-2433 and denies the conditioning of such certificate upon Panhandle's providing Central West with a service consisting of a contract demand of 12,000 Mcf and in so far as such opinion and order fail and refuse to deny such certificate for the enlargement of said ten laterals unless Panhandle eliminates the unlawful discrimination it has practiced against Central West and other customers served from the Liberty lateral. In support of its application for rehearing and a stay Central West respectfully sets forth the following grounds upon which this application is based:

I.

THE COMMISSION ERRED IN HOLDING THAT UNDER SECTION 7(E) IT LACKS THE POWER TO ATTACH REASONABLE TERMS AND CONDITIONS FOR THE ELIMINATION OF UNLAWFUL DISCRIMINATION TO THE ISSUANCE OF A CERTIFICATE..

The Commission erred in holding that as a matter of law the Federal Power Commission lacks authority under the Natural Gas Act to impose conditions on the issuance of the certificate of convenience and necessity herein which would necessitate the enlargement by Panhnadle of the Liberty Lateral to eliminate unlawful discrimination

and for that reason reversing the Initial Decision of the Presiding Examiner in this matter, in so far as such condition was imposed therein (Opinion 292, pp. 12 and 14), for the reason that Section 7(e) of the Natural Gas Act, as amended February 7, 1942, provides that the Commission shall have the power to attach to the issuance of a certificate of public convenience and necessity and to the exercise of the rights granted thereunder such reasonable terms and conditions as the public convenience and necessity may require, the evidence being overwhelming and undisputed that because of lawful discrimination the public convenience and necessity require the additional service described in the conditions. For that reason the holding and reversal referred to above are contrary to law and the provisions of the Natural Gas Act, are arbitrary and capricious and constitute an abuse of discretion, and deny Central West relief to which it is entitled under the Act and deprive it of property without due process of law, contrary to the Fifth Amendment to the Constitution of the United States.

II.

Section 7(e) Being an Amendment to the Natural Gas Act Supersedes Original Section (a) to the Extent That There May Be Any Conflict Between the Two Sections.

The Commission erred in holding as a matter of law, that Section 7(a) of the Natural Gas Act prohibits the im-

position under Section 7(e) of the condition described above, for the reason that Section 7(a) was enacted on June 21, 1938, whereas Section 7(e) was enacted on February 7, 1942, as part of an amendment of the Natural Gas Act, which was designed to and does cover the entire subject of the issuance, denial and condition of certificates of public convenience and necessity under the Natural Gas Act, and for that reason Section 7(a), being the older of two inconsistent Acts of Congress covering the same subject matter (if so) was superseded and repealed by the enactment of Section 7(e), to the extent that the two are or may be claimed to be in conflict. Consequently, the reversal of the Examiner's order imposing the condition in question on the ground that such action is prohibited by Section 7(a), of the Act, has the effect of holding in this instance, that an amendment of an Act of Congress is subject and subordinate to the original act which it amended and is contrary to law and the Natural Gas Act as now constituted, is arbitrary, capricious and an abuse of discretion, denies Petitioner relief which is its statutory right under the Natural Gas Act, and deprives it of its property without due process of law contrary to the Fifth Amendment to the Constitution of the United States.

III.

THE DECISION OF THE THIRD CIRCUIT IN THE PANHANDLE CASE IS NOT APPLICABLE HERE AND MOREOVER DOES NOT HOLD THAT IT IS BEYOND THE POWER OF THE COMMISSION TO CONDITION A CERTIFICATE UPON THE ELIMINATION OF UNLAWFUL DISCRIMINATION.

The Commission erred in holding that the decision of the Court of Appeals for the Third Circuit in *Panhandle Eastern Pipe Line Company* vs. *Federal Power Commission*, 204 F. 2d 675 (hereinafter referred to as the *Panhandle* case), requires the reversal of the Presiding Examiner on the issue of the condition in question, for the reason that the only issue which the Court had before it and decided in that case was that in a proceeding before the Commision which did not involve the issuance, denial or conditioning of a certificate of public convenience and necessity, the provisions of Section 5(a), which confer upon the Commission power to direct the elimination of unduly discriminatory and preferential practices, must be read in the light of and construed as subject to the proviso in Section 7(a) and therefore that the Commission could not under the provisions of Section 5(a) compel the enlargement of the transportation facilities of a natural gas company because of the prohibition to the contrary contained in Section 7(a). For that reason the Court held that it was beyond the power of the Commission to order Panhandle within 45 days to take steps to eliminate discrimination in the service between the customers on its Liberty lateral and those on other of its laterals by enlarging the facilities of the Liberty Lateral.

The Court did not decide in that case, as the Com-

mission erroneously holds here that it did, that, in a proceeding before the Commission which does involve the issuance, denial or conditioning of a certificate of public convenience and necessity under the Amendment of 1942, the provisions of amendatory Section 7(e), which confer on the Commission power to attach terms and conditions to the issuance of or the exercise of rights under such a certificate, must be read in the light of and construed as subject to the proviso in original Section 7(a) prohibiting involuntary enlargement of transportation facilities, nor did it hold that original Section 7(a) prohibits the imposition of such terms and conditions under amendatory Section 7(e), even though compliance therewith may require such enlargement.

Therefore, the decision in the *Panhandle* case is not in point, and not controlling here. The Commission's action in reversing the order of the Presiding Examiner with respect to the condition in question is neither warranted nor supported by the decision in the *Panhandle* case and that action, therefore, is contrary to law and to the Natural Gas Act, constitutes an abuse of discretion, is arbitrary and capricious, denies Petitioner relief according to its statutory right, and deprives ~~Central West~~ of its property without due process of law contrary to the Fifth Amendment of the Constitution of the United States.

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IV.

THE PANHANDLE DECISION DOES NOT HOLD THAT THE MANAGEMENT OF A NATURAL GAS COMPANY HAS UNFETTERED JUDGMENT TO IMPOSE WITH IMPUNITY UNLAWFUL DISCRIMINATION UPON ONE OR MORE OF ITS CUSTOMERS AND THAT THE COMMISSION IS POWERLESS TO DIRECT THE ELIMINATION OF SUCH DISCRIMINATION BY CONDITIONING A CERTIFICATE.

The Commission erred in holding that the Court's language establishes under the Act a sphere wherein the judgment of the stockholders and directors of the company has free exercise and that the investment of capital for the purpose of enlarging pipeline facilities comes within that sphere even though such enlargement perpetuates and increases unlawful discrimination.

In addition, the Commission erred because the Court did not hold, either directly or by remote implication, that there is any sphere of immunity from regulation under the Act where the judgment of the stockholders and directors is free, supreme and exclusive, with respect to employment of capital to enlarge facilities and within which the Commission is without authority to regulate natural gas companies under its jurisdiction to prevent the discrimination prohibited by Section 4(b), and to insure that the requirements of public convenience and necessity shall be equitably and uniformly supplied and satisfied in each and every part of the system of such company. For that reason the action of the Commission in setting aside the order of the Presiding

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Examiner on the condition in question upon the ground that such condition invades the sphere of unregulated

managerial discretion described by the Commission is not supported or warranted by the decision in the *Panhandle* case and in addition is contrary to the letter and spirit of the Natural Gas Act, is capricious and arbitrary, and an abuse of discretion. Such action denied Central West relief that it is entitled to under the Act, and deprives it of its property without due process of law contrary to the Fifth Amendment to the Constitution of the United States.

V.

CONDITIONING PANHANDLE'S CERTIFICATE UPON THE ELIMINATION OF UNLAWFUL DISCRIMINATION DOES NOT PRECLUDE FREE EXERCISE OF MANAGERIAL DISCRETION IN LAWFUL SPHERES BUT RATHER ONLY PRECLUDES MANAGERIAL DISCRETION TO UNLAWFULLY DISCRIMINATE AND THEREBY VIOLATE THE NATURAL GAS ACT.

The Commission also erred in reversing the order of the Examiner on the condition in question on the ground that the condition, by imposing coercion upon Panhandle through any economic pressure which would result therefrom, precludes the free exercise of managerial discretion to "enlarge markets of its own choice" rather than "enlarging its facilities to serve markets which do not, in Panhandle's considered judgment, warrant the investment involved." (Opinion 292, mimeo p. 14) for the reason that such holding and decision of the Commission are contrary to and in direct conflict with the following controlling decisions of the

Supreme Court of the United States.

United Fuel Gas Company, et al. v. Railroad Commission of Kentucky, et al., 278 U. S. 300, 73 L. Ed. 390, 49 S. Ct. 150;

People ex rel. N. Y. & Q. Gas Co. v. *McCall*, 245 U. S. 345, 62 L. Ed. 337, 38 S. Ct. 122;
Russell v. *Sebastian*, 233 U. S. 195, 58 L. Ed. 912, 34 S. Ct. 517.

In each of the above cases uniformly it was held:

> "Corporations which devote their property to a public use may not pick and choose, serving only the portions of the territory covered by their franchises which it is presently profitable for them to serve and restricting the development of the remaining portions by leaving their inhabitants in discomfort without the service which they alone can render. To correct this disposition to serve where it is profitable and to neglect where it is not, is one of the important purposes for which these administrative commissions, with large powers, were called into existence, * * *" (*People ex rel. N. Y. & Q. Gas Co.* v. *McCall*, 245 U. S. 351, 62 L. Ed. 342)

Therefore, the action of the Commission in reversing the Presiding Examiner on the imposition of the condition in question upon the mistaken assumption that such wrongfully interferes with the free exercise of managerial discretion to pick and choose among presently established markets which it desires to enlarge and those which it desires to neglect, is in direct conflict with the controlling decisions of the Supreme Court of the United States, and furthermore is unwarranted and unsupported by the decision in the *Panhandle* case, is contrary to the Natural Gas Act; is capricious, arbitrary and constitutes

an abuse of discretion, denies Central West relief to which it is entitled under the Natural Gas Act, and deprives it of its property without due process of law in violation of the Fifth Amendment to the Constitution of the United States.

VI.

THE PANHANDLE DECISION DID NOT HOLD THAT THE JUDGMENT OF STOCKHOLDERS AND DIRECTORS TO UNLAWFULLY DISCRIMINATE WAS BEYOND THE CONTROL OF THE COMMISSION.

The Commission erred by holding herein that under the Natural Gas Act, as construed by the Court in the *Panhandle* case, there is a field wherein the judgment of the stockholders and directors of the company has free exercise beyond control of the Commission to regulate in the public interest, and wherein a natural gas company may pick and choose with impunity which of its established markets it will enlarge and which it will not. In so holding the Commision, without good cause or reason, has in effect overruled a long line of its own important policy-making decisions in which the Commission has utilized the authority of Section 7(e) in certificate proceedings to condition the issuance of certificates to forestall and prevent threatened discrimination appearing on the face of the application or on the record. Typical of this line of cases is *In re Texas Eastern Transmission Corporation*, 8 F. P. C. 139, wherein it was held:

> "A natural-gas company under the Natural Gas Act may not lawfully single out a particular customer or group of customers, and by contract grant a

> preference in service. Nor may we approve such an arrangement which disregards the public interest in other states and areas, which is prejudicial as to some and preferential as to others."

Similarly *In re Northern Natural Gas Company* (F. P. C. Docket No. G-1618) 94 PUR (ns) 485, a certificate case, the applicant's proposals, if authorized, would have resulted

in unfair discrimination in service along a lateral, the Commission avoided that discrimination in advance by conditioning the issuance of the certificate under Section 7(e) on terms that required the employment of additional capital for the enlargement of lateral transportation facilities.

Again in its order of June 7, 1956, in Docket Nos. G-1116, et al., a proceeding involving the situation now under consideration, the Commission affirmed and adopted as its own the following language contained in the Initial Decision of Examiner Law, and thereby in connection with this very situation subscribed to the policy represented by the *Texas Eastern* case and others and recognized the propriety of employing that procedure here:

> "* * * When additional capacity on Panhandle's system available to customers other than those on the 'Liberty' lateral is constructed and operated, further and similar unlawful discrimination in service among Panhandle's customers will necessarily result, unless the construction and operation of such additional system capacity is conditioned upon Panhandle's application for certification, and construction and operation when and if authorized, of sufficient additional delivery capacity on the 'Liberty' lateral to enable Panhandle's customers which can receive gas service from Panhandle only through deliveries from the Liberty

> Lateral to receive their equitable share of the additional natural gas made available by the added *system* capacity.
>
> "In this proceeding, the issue of authorization of additional system capacity is not involved. Hence, this means of removing and preventing unlawful discrimination in service is not available to the undersigned hearing officer." (Initial Decision, Presiding Examiner Law, Docket G-1116, et al. issued April 19, 1955, mimeo pp. 13, 14).

By these and other cases of like tenor and effect, the Commission has established a salutary policy of long standing, whereby discriminatory practices have been controlled by prevention in advance of construction through the imposition of conditions on the issuance of certificates under Section 7(e) regardless of whether those impositions involved the use of additional capital or not. Such policy has not until now been seriously or successfully questioned either in the Courts, or by the industry or before Congress.

In reversing and setting aside the order of the Presiding Examiner attaching the condition in question to the issuance of the certificate, for the stated reason recited in substance in this specification, the Commission, by clear implication has overruled the *Northern Natural, Texas Eastern* and other similar cases and abandoned the policy described above. Such action is opposed to sound public policy and to the public interest, is contrary to the Natural Gas Act, is arbitrary and capricious and con-

stitutes an abuse of discretion. It denies Central West relief which is its right under the Natural Gas Act, and deprives it of its property without due process of law contrary to the Fifth Amendment to the Constitution of the United States.

VII.

Economic Feasibility Is Completely Irrelevant and Immaterial to a Certificate Condition Designed to End or Prevent Unlawful Discrimination.

The Commission erred in setting aside the order of the Presiding Examiner on the condition in question on the ground that the record does not establish the economic feasibility of the project for the enlargement of the Liberty Lateral contended for by Central West and relied on by the Presiding Examiner for the following reasons:

(a) Under Section 7(e) of the Natural Gas Act, the presence or absence of the economic feasibility of any project that may be required by a condition attached to a certificate of public convenience and necessity is wholly irrelevant and immaterial. The language of the Natural Gas Act in this connection is clear and explicit. It empowers the Commission to attach to the issuance of a certificate "such reasonable terms and conditions as the public convenience and necessity may require." The Act does not read "such reasonable terms and conditions as the public convenience and necessity may require which are found to be economically feasible." Under the language of the Act require-

ments of public convenience and necessity are paramount and provide the sole and exclusive criteria for the reasonableness of the terms and conditions. Any natural gas company subject to such a condition is at all times completely protected against loss from any lack of economic feasibility in a project required by the Commission to be constructed as a condition to a certificate because the provisions of Section 4(a) of the Act require just and reasonable rates. Hence, economic feasibility, if in fact it is absent in this instance which Central West denies, is not a determinative factor and the Commission erred in holding that it is.

(b) Assuming, without conceding, that evidence of economic feasibility is relevant and material in a proceeding involving the attachment of a condition to the issuance of a certificate, it is manifestly unfair, unjust and unreasonable, arbitrary and capricious, to deny relief under Section 7(e) to a customer company seeking such relief by reason of a failure on its part to assume the burden of proving markets, loads and revenue, Panhandle's expenses, depre-

ciation, return and other components of cost of service for substantially all of the facts and figures encompassed within the exclusive possession and under the control of Panhandle and hence unavailable to a customer company seeking relief under Section 7(e).

(c) The Commission erred in stating that there

was no study of markets submitted in the course of the hearing. Central West presented a comparative analysis of the market statistics filed by Panhandle as Exhibit "X" to the original application herein the presentation referred to being in the form of an exhibit which was identified as Exhibit No. 132. That Exhibit contained a segregation and an analysis of market statistics, which were collected and provided by Panhandle as to (1) the Liberty lateral, and (2) the laterals included in Panhandle's application in Docket No. G-2433. Such exhibit showed that in percentages of increase in number of customers, annual gas requirements, and peak day gas requirements, the estimates of the companies receiving gas from the Liberty lateral compared favorably with similar percentages relating to the laterals included in Panhandle's enlargement program (See Initial Decision, p. 34). When offered this exhibit was denied admission in evidence on the ground that it was merely a summarization of figures in the record and, under the Commission's practice, should be included in the briefs and not in the record (Tr. 2908-2914). Accordingly, it was attached as Appendix "A" to the brief of Central West filed with the Presiding Examiner and is here referred to for the information of the Commission.

(d) The Commission erred in finding that on the evidence there was no way for appraising the economic feasibility of the enlargements on the basis of annual use or load factor and that the Commission could not conclude that the

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basis for enlarging the lateral had been shown to be economically feasible. In addition to what was said in Specification VII(a) about the lack of materiality and relevancy of evidence of economic feasibility, Central West respectfully submits that in this connection the Commission has overlooked, disregarded and failed to give effect to the undisputed testimony of Dr. Frances Gaw, Senior Research Analyst on the Staff of the City Planning Commission of Kansas City, Missouri (Tr. pp. 2270-2344), Mr. Lisle Jeffrey, Staff Member of the Industrial Section of the Division of Resources and Development of the State of Missouri (Tr. pp. 2822-2894), and Mr. Walter Vaughn, Vice President and Director of Central West Utility Company (Tr. pp. 2822-2894; 5158-5173) and the exhibits sponsored by such witnesses to the effect that the certificated service area of Central West includes parts of the suburban territory immediately contiguous to Kansas City, Missouri, wherein there has lately occurred, and will in the near future continue to occur, a phenomenal increase in population, and where there has also been experienced an increase in large industrial enterprises, and that such certificated service area has a high industrial potential with abundant open area for plants available for large-scale industrial development under circumstances favorable to such development except for the absence of natural gas, and that if natural gas were made available in the area in volumes adequate for industrial use on an interruptible basis gas consuming industries would fol-

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low, with the result that Central West's certificated territory, now wholly dependent upon Panhandle gas, would provide a market for gas with a balanced load which would have a high load factor and that present and future public

convenience and necessity require the project for the enlargement of the Liberty lateral contended for by Central West and relied on by the Presiding Examiner. See also items in brief of Central West Utility Company, etc., before the Hearing Examiner entitled "Central West's Lost Opportunities to Balance Lateral Load-Factor with Major Interruptible Contracts", p. 9, "Requirements of Present and Future Public Convenience and Necessity", p. 10, "Panhandle's Market Data as to Liberty Lateral and Favored Laterals", p. 12, "The Industrial Potentials of the Area", pp. 14-17.

For all of the reasons herein stated Central West alleges and asserts that the Commission erred in holding that proof of economic feasibility was necessary to support a condition imposed under Section 7(e) of the Natural Gas Act and that for want of certain evidence specified in Opinion 292 mentioned above, the Commission cannot ascertain and determine that the project would be economically feasible and hence that the condition imposed by the Examiner was reasonable for the reason that such holding and finding is contrary to the Natural Gas Act and is not only unsupported by any substantial evidence but is contrary to all of the substantial evidence in the case and said holding and finding

are arbitrary and capricious, constitute an abuse of discretion, deprive Central West of its property without due process of law contrary to the Fifth Amendment to the Constitution of the United States.

VIII.

Finding 5 Is Completely Contrary to the Undisputed Evidence.

The Commission erred in its Finding No. 5 (Opinion 292, mimeo p. 30) in so far as it there finds that Panhandle is

willing to conform to the provisions of the Natural Gas Act, as amended, and the requirements, rules and regulations of the Commission thereunder, for the reason that such finding is unsupported by and contrary to all the evidence and to every declaration of intent and purpose with respect to the Liberty lateral made by Panhandle on the record in the course of these proceedings. Panhandle has consistently and repeatedly stated it is not willing to cease and desist from, or to eliminate the unlawful discriminations heretofore found and established by the Commission in Opinion 218 in Docket No. G-1116, et al., as between the Liberty Lateral and the Maumee and Adrian laterals, or to abstain from and avoid the unlawful discriminations proposed in its Application in Docket G-2433 as between the customers and ultimate consumers on the Liberty Lateral and the customers and ultimate consumers on the ten laterals involved in such application and in Opinion 292 (Mimeo p. 8). Such finding is not only unsup-

ported by any substantial evidence in the record but is contrary to all of the evidence in the case, and for that reason such finding is arbitrary and capricious and constitutes an abuse of discretion, and denies Central West relief to which it is entitled under the Act and deprives it of its property without due process of law contrary to the Fifth Amendment to the Constitution of the United States.

IX.

Finding 6 Is Erroneous Because the Certificate Should Have Been Denied Under Section 7(b), or Alternately, Conditioned Upon Panhandle's Elimination of Unlawful Discrimination Against the Liberty Lateral.

The Commission erred in its Finding No. 6 (Opinion 292, mimeo p. 30) to the effect that the construction and operation for which Panhandle seeks authorization in Docket No. G-2433 are required by the public convenience and necessity and that a certificate therefor should be issued as thereinafter ordered and conditioned, for the reason that such finding disregards and fails to give effect to the undisputed evidence, supported by every declaration of purpose and intent made by Panhandle in the record herein and in the course of the hearing, that it was not willing to conform with the provisions of the Natural Gas Act and the rules, regulations and requirements of the Commission thereunder with respect to the long standing and prospective discriminations against Central West and other customers and the gas consuming public receiving service from the Liberty

lateral in violation of Section 4(b) of the Act. Therefore, the finding of the Commission should have been that the certificate sought in Docket No. G-2433 be denied under the mandatory requirement of Congress contained in Section 7(e) of the Natural Gas Act, or in the alternative, that any certificate issued in Docked No. G-2433 should be subject to the terms and conditions attached to the issuance thereof or the exercise of rights thereunder specified in the initial opinion by the Presiding Examiner. And the Commission's failure to find either that the certificate in Docket No. G-2433 should be denied or dismissed, or that

such condition should be imposed upon the issuance thereof or the exercise of rights thereunder is not only unsupported by any substantial evidence in the record but also is contrary to all the evidence in the record relating to this matter, and the Commission's action in this respect is arbitrary and capricious, constitutes an abuse of discretion, denies Central West relief to which it is entitled under the Act and deprives it of property without due process of law contrary to the Fifth Amendment to the Constitution of the United States.

X.

FINDING 7 IS ERRONEOUS BECAUSE IT IMPOSES NEW AND ADDITIONAL UNLAWFUL DISCRIMINATION AGAINST CENTRAL WEST.

The Commission erred in its Finding No. 7 (Opinion 292, mimeo p. 30) wherein the Commission found that it is in

the public interest for Panhandle to continue to serve its resale customers with volumes of gas equal to the winter contract demands approved by the Commission in Appendix A of its order of October 5, 1955, as corrected, during the winter months, because the volume of gas there allocated to Central West was 5,540 Mcf., notwithstanding the fact that the estimated peak-day requirement of Central West for the winter of 1954-55 at 0° F. was 8,439 Mcf., and because that estimate is now obsolete by virtue of intervening growth of demand and Central West's offer on the record to sign a contract with Panhandle for a winter contract demand of 12,000 Mcf.

Such action of the Commission is erroneous for the reason that such allocation, if carried into effect will result in the granting of an undue preference and advantage to Panhandle's other customers (except those served from the

Liberty lateral) because such customers are provided with peak-day volumes of gas substantially equal to or in excess of their current maximum requirements, whereas Central West and Panhandle's other customers along the Liberty lateral are subjected to undue prejudice and disadvantage by being restricted to peak-day volumes of gas far below their requirements.[1] Furthermore, such alloca-

tion, if carried into effect, will establish by Commission order an unreasonable difference in service and facilities as between localities served from the Liberty lateral and those served from other laterals in Panhandle's system and from the main line itself, all contrary to and in violation of Section 4(b) of the Natural Gas Act.

Such action is also erroneous because it sanctions and approves an abandonment of service without a hearing on that issue or a finding by the Commission that the available supply of natural gas is depleted to the extent that the continuance of service is unwarranted, or that the present or future public convenience and necessity permit such abandonment, contrary to the provisions of Section 7(b) of the Natural Gas Act. In addition such finding is otherwise contrary to law, is not supported by but is contrary to the substantial evidence in the record, is arbitrary and capricious, constitutes an abuse of discretion, denies Central West relief to which it is entitled under the Natural Gas Act and deprives it of its property without due process of law contrary to the Fifth Amendment of the Constitution of the United States.

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[1] In the case of Central West the 5,540 Mcf. maximum peak-day obligation is only approximately 72% of the 7,741 Mcf. it took on February 1, 1951 (Exh. 129; see also, Tr. Docket G-1116, et al., pp. 9,250-51).

XI.

Ordering Paragraph A Is Erroneous Because the Evidence Established That Panhandle Was Violating the Natural Gas Act.

The Commission erred in its Ordering paragraph (A) (Opinion 292, mimeo p. 32), whereby a certificate of public

convenience and necessity was issued in Docket No. G-2433 and other dockets, authorizing Panhandle Eastern Pipe Line Company to operate the facilities now involved in said proceeding for the reason that under the facts and circumstances heretofore stated herein, the application of Panhandle in Docket No. G-2433 should have been dismissed and denied for all of the reasons stated in Specification IX above and said order for such reasons is contrary to law and the Natural Gas Act, is unsupported by substantial evidence and is contrary to all of the substantial evidence in the record, is arbitrary and capricious, constitutes an abuse of discretion, denies Central West relief to which it is entitled under the Act and deprives it of its property without due process of law contrary to the Fifth Amendment of the Constitution of the United States.

XII.

Ordering Paragraph B Is Erroneous Because It Has the Effect of Approving the Abandonment of Service Contrary to Section 7(b).

The Commission erred in its Order (b) (Opinion No. 292, mimeo p. 32) in so far as it attaches to the exercise of the rights granted to Panhandle by Paragraph (A) a condition that Panhandle shall provide to Central West no more than 5,540 Mcf of gas on any one day during the winter months rather than conditioning the granting of the cer-

tificate that Panhandle shall serve Central West with 12,000 Mcf per day in accordance with the orders and recommenda-

tions of the Examiner, or, in the alternative, to dismiss and deny such application in toto in accordance with the provisions of Section 7(e) of the Act, for the reason that such order, if carried into effect, will result in unlawful discrimination in violation of Section 4(b) of the Act and will sanction and approve an abandonment of service contrary to the provisions of Section 7(b) of the Act all as more fully stated in Specification X above. Said order is not supported by but is contrary to the substantial evidence in the record, is arbitrary and capricious, constitutes an abuse of discretion, denies Central West relief to which it is entitled under the Natural Gas Act and deprives it of its property without due process of law contrary to the Fifth Amendment of the Constitution of the United States.

WHEREFORE, Central West Utility Company respectfully requests that the Commission grant a rehearing on its order of June 30, 1956, and upon such rehearing and reconsideration determine the issues in Docket No. G-2433 in so far as they involve the Liberty Lateral in accordance with the proposed and requested findings and conclusions filed by Central West as part of its brief before the Presiding Examiner (Brief of Central West Utility Company, etc., pp. 22-25) copy of which is hereto attached as Appendix "A", and Central West further requests that the order of June 30, 1956, be

stayed pending such rehearing and reconsideration.

Respectfully submitted,

/s/ LESTER G. SEACAT
Central Trust Building
Jefferson City, Missouri

/s/ DICK H. WOODS
Nine West Tenth Street
Kansas City 5, Missouri
Attorneys for The Central Utility Company

Of Counsel:

STINSON, MAG, THOMSON, MCEVERS & FIZZELL
Nine West Tenth Street
Kansas City 5, Missouri

July 26, 1956.

STATE OF MISSOURI,
COUNTY OF JACKSON, SS.:

DICK H. WOODS, being first duly sworn, states that he is attorney and counsel for The Central West Utility Company and that as such he has signed the foregoing "Application of The Central West Utility Company for Rehearing of 'Opinion and Order Issuing Certificates of Public Convenience and Necessity Under Section 7(c), Authorizing Exportation of Natural Gas Under Section 3 and Denying Applications Under Section 7(a) of the Natural Gas Act' and For a Stay" for and on behalf of said company; that he is authorized so to do; that he has read said document and is familiar with the contents thereof and that the matters and things therein set forth are true and correct to the best of his infor-

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mation, knowledge and belief.

/s/ DICK H. WOODS

Subscribed and sworn to before me this 26th day of July, 1956

/s/ MARJORIE SPURLOCK
Notary Public

My commission expires: May 24, 1958.

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APPENDIX "A"

"PROPOSED AND REQUESTED FINDINGS AND CONCLUSIONS

"Central West Utility Company respectfully requests that the following findings and conclusions or the substantial equivalent thereof be made herein:

"(1) That the failure and refusal of Panhandle Eastern Pipe Line Company to offer and afford to Central West Utility Company, Intervenor herein, a customer served by it from the Liberty Lateral, the same or similar service which it has offered and afforded to customers served by it from the Maumee, Adrian and Peoria laterals for a long period of time prior to January 1, 1953, and continuously since then has constituted and now constitutes unlawful discrimination in service among customers, and undue preference and advantage to some customers, and undue prejudice and disadvantage to others in violation of the Natural Gas Act.

"(2) That Panhandle Eastern Pipe Line Company by its failure to offer and afford this Intervenor, Central West Utility Company, a customer served from the Liberty Lateral, the same or similar services that it proposes to and will offer to and afford its customers served from the ten laterals in its present improvement program constitutes unlawful discrimination in service among its customers, and undue preference and advantage to some customers

and undue prejudice and disadvantage to others in violation of the Natural Gas Act.

"(3) That Panhandle Eastern Pipe Line Company is not able and willing properly to conform to the provisions of the Natural Gas Act and the requirements, rules and regulations of the Commission thereunder, with respect to such unlawful discrimination.

"(4) That Panhandle Eastern Pipe Line Company will not be able properly to conform to the provisions of the Natural Gas Act, and the requirements, rules and regulations of the Commission thereunder, until it has sought and obtained authorization from the Commission, and, pursuant thereto, has installed and put into operation such improvements and facilities in the Liberty Lateral as will enable it to offer and afford the Central West Utility Company the same or similar service that it is now offering and affording its customers served and to be served from each and all of the laterals mentioned in the foregoing findings.

"(5) That the present and future public convenience

and necessity require that Central West Utility Company be offered and afforded the same or similar service from the Liberty Lateral as that Panhandle is now offering to its customers who are being served from each and all of the laterals mentioned in the foregoing findings.

PROPOSED FORM OF ORDER

"Under the circumstances, counsel for Intervenor desire to submit for the consideration of the Commission a form of order which seems to counsel to be appropriate. For the reasons hereinafter stated, counsel believe that an order in substantially the following form would conform to the statutory framework, and the necessities of the situation that confront the Commission.

"'The Commission *orders:*

"'(A) That the Application For a Certificate of Public Convenience and Necessity filed by Pan-

handle Eastern Pipe Line Company on May 18, 1954, in Docket No. G-2433, be denied effective on July 1, 1956 (or such other date as may be deemed appropriate for this purpose) provided that if and when, prior to that time, Panhandle Eastern Pipe Line Company shall seek and obtain from the Commission authorization to install and put into operation and, pursuant thereto, shall actually install and put into operation such improvements and facilities in the Liberty Lateral as will enable it to offer and afford to the Central West Utility Company the same or similar service as that which it is now offering and affording or will offer and afford when its present lateral improvement program is contemplated to its customers on the so-called Maumee, Adrian, Peoria and other laterals referred to in the application, evidence and findings herein, the denial of the application shall be set aside and held for naught, and such application shall be sustained and granted. Otherwise the order of denial of the application shall become final and absolute on July 1, 1956.' "

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BEFORE THE
FEDERAL PFWER COMMISSION

IN THE MATTERS OF

Docket Nos. G-1705, G-1937, G-2433, G-2475 and G-8665

PANHANDLE EASTERN PIPE LINE COMPANY

Docket No. G-8471

VILLAGE OF FRANKLIN, ILLINOIS

Docket No. G-8526

CITY OF HICKMAN, KENTUCKY

Docket No. G-8664

TRUNKLINE GAS COMPANY

Docket No. G-8771

CITY OF CLINTON, KENTUCKY

Docket No. G-8888

CITY OF LACENTER, KENTUCKY

Docket No. G-8939

CITY OF BARDWELL, KENTUCKY

Docket No. G-8962

CITY OF WICKLIFFE, KENTUCKY

Docket No. G-8963

LAKE COUNTY UTILITY DISTRICT

Application of Michigan Consolidated Gas Company for Rehearing

Comes now Michigan Consolidated Gas Company (Michigan Consolidated) and, pursuant to Section 19 of the Natural Gas Act and Section 1.34 of the Commission's Rules of Practice and Procedure, hereby applies for rehearing on Paragraphs (H) and (I) of the Commission's order issued June 30, 1956 and accompanying its Opinion No. 292 in the above-captioned matters. Michigan Consolidated respectfully requests that Paragraphs (H) and (I) of said order be rescinded and that pending such rescission, the provisions of said Paragraphs (H) and (I) be stayed.

Michigan Consolidated further applies for rehearing on Paragraph (B) of the above-mentioned order and requests that said Paragrah (B) be modified:

(1) to require Panhandle Eastern Pipe Line Company (Panhandle) to store the 15,500,000 Mcf of natural gas per year which it proposes to export to Union Gas Company of Canada, Limited (Union) in Panhandle's Howell Field in order to meet the unsatisfied requirements of its customers in the United States, or to show cause why it should not do so, and;

(2) to require Panhandle before exporting any gas to Union to offer such gas under its I-1 Rate Schedule to its customers, including Michigan Consolidated which desires to purchase up to 100,000 Mcf of natural gas per day on an interruptible basis.

Michigan Consolidated is a public utility engaged in the production, purchase, transportation, distribution and sale of natural gas in various cities, towns, villages and townships within the State of Michigan. These activities are carried on in eight separate districts in and around Detroit,

Ann Arbor, Grand Rapids, Muskegon, Mount Pleasant, Greenville-Belding, Big Rapids and in its Pipeline District.

Michigan Consolidated purchases 125,000 Mcf of natural gas daily from Panhandle at Detroit and 2,000 Mcf daily for Ann Arbor. Michigan Consolidated has long been one of Panhandle's largest customers.

As hereinafter shown, Michigan Consolidated is aggrieved by the above-mentioned provisions of the Commission's order issued June 30, 1956 as to which rehearing is sought.

The grounds upon which this application for rehearing is based are as follows:

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I.

The Commission exceeded its statutory authority in authorizing the export of gas under Paragraphs (H) and (I) of its above-mentioned order since:

(A) As shown by the legislative history and the Commission's consistent interpretation of Section 3 of the Act, the Commission has no authority to authorize the exportation of natural gas where there is a demand for such gas in the United States and the exportation of the gas may or will impair the applicant's ability to render adequate service to its customers in the United States.

(B) There is no dispute with respect to the need of Panhandle's existing customers in the United States for additional gas. In connection with its original application in Docket No. G-2433 to expand its capacity by 455,000 Mcf per day (including 200,000 Mcf per day to be provided by the Waverly Storage Field) Panhandle entered into agreements with most of its customers covering the increased contract demands they needed and desired to purchase. However, Panhandle thereafter abandoned the Waverly

Storage project and all but 100,000 Mcf per day of its original program. This increase, plus 80,000 Mcf per day from "operational improvements" and 80,000 Mcf per day from Trunkline Gas Company (Trunkline), resulted in an increase of only 260,000 Mcf per day. The contract demands of 15 of Panhandle's existing

customers—to which Panhandle had previously agreed—had to be reduced by 187,200 Mcf per day. In its repeated attempts to abandon 30 per cent of its long-standing deliveries to Michigan Consolidated at Detroit, Panhandle relies on the unsatisfied demands of its other customers in the United States.

(C) As shown by Panhandle's prior representation to the Commission and by the uncontroverted evidence of Michigan Consolidated, Panhandle's Howell Field in the State of Michigan can be readily and economically developed for storage. This would provide a working storage capacity of 18,400,000 Mcf and a daily deliverability of 282,000 Mcf. The 15,500,000 Mcf per year proposed to be exported to Canada can thus be stored in Panhandle's Howell Field to meet the unsatisfied peak day demands of Panhandle's customers in the United States.

(D) Pending development of the Howell Field for storage, the 15,500,000 Mcf of natural gas proposed to be exported should be delivered and sold to Panhandle's customers, including Michigan Consolidated, pursuant to the provisions of Paragraph 7 of Panhandle's I-1 Rate Schedule on an interruptible basis, as more fully set forth at a later point in this application for rehearing.

(E) Since Panhandle proposes to export the 15,500,000 Mcf of natural gas per year to Union at unregulated rates

which will be at least 120 per cent of Panhnadle's regulated rates to its utility customers in Michigan, Panhandle will have an economic incentive to export as much gas as possible to Canada. The Commission's action in authorizing Panhandle to export this gas thus gives Union a priority, as a practical matter, over all of Panhandle's resale customers in the United States, which is clearly contrary to the Natural Gas Act.

(F) In proposing to export 15,500,000 Mcf per year for a period of 20 years, Panhandle is relying upon Trunkline for 370,000 Mcf per day of its gas supply, whereas Trunkline's gas supply is adequate for only two years without "spot purchases" and Trunkline's own estimates showed a supply for only 12 years, even with all the "spot purchases" it erroneously claimed.

(G) The Commission's action in authorizing Panhandle to export the 15,500,000 Mcf per year is based upon a misinterpretation of its authority under the Natural Gas Act. The Commission has no jurisdiction in Canada and is unable to determine or control the use or uses to which the exported gas is put in Canada. Under Section 3 of the Act the Commission has no authority to weigh the end uses of the gas in Canada and in the United States. Denial by the Commission of the proposed export of gas to Union is not detrimental to the interests of the people of Canada since the Canadian Government is now financing the construction of a natural gas pipeline to eastern Canada which will make ample supplies of gas

available for that market.

II.

Paragraphs (H) and (I) of the above-mentioned order issued June 30, 1956 are not supported by adequate findings and the Commission findings are not supported by the evidence and matters within the Commission's official knowledge, in that:

(A) The Commission erroneously concluded in its Opinion No. 292 (p. 4) that, with respect to Panhandle's proposed exportation, "the controversy centers chiefly on the matter of gas supply." As shown by this statement, the Commission misconceived the issues posed in this phase of the proceeding.

(B) As previously stated, the Commission exceeded its authority under the Act when it undertook (Op. 292, p. 22) to weigh the end uses of the gas in the United States and Canada.

(C) The Commission's conclusion (Op. 292, p. 22) that there should have been additional evidence with respect to the use of the Howell Field for storage overlooks the fact that such additional evidence was peculiarly within the knowledge of Panhandle which, as the applicant, had the burden of proof. Moreover, the evidence presented by Michigan Consolidated with respect to the use of the Howell Field for storage is cogent, complete and stands uncontroverted in the record.

(D) The Commission did not and could not find that the proposed exportation will not impair Panhandle's ability to maintain adequate service to its customers in the United States, as required by Section 3 of the Act.

(E) The "degree of reliability an applicant has demonstrated in meeting the requirements of its customers" (Op. 292, p. 20) does not provide "substantial support for the proposed exportation of gas by Panhandle." As previously pointed out, the contract demands of 15 of Panhandle's existing customers—to which Panhandle had previously agreed—are at least 187,200 Mcf per day in excess of the volumes Panhandle is able to deliver to such customers if Panhandle does not develop the Howell Storage Field and exports 15,500,000 Mcf of natural gas per year to Canada. Moreover, there are space heating restrictions throughout the Panhandle system and the chronic shortages on the Panhandle system have required almost continuous allocation proceedings for the past several years.

(F) The Commission's characterization of the proposed deliveries to Canada as being "interruptible" and subject to "curtailment" when such gas is needed in the United States (Op. 292, pp. 21, 23) is refuted by the fact that Panhandle would be obligated to deliver at least 90 per cent of the 15,500,000 Mcf of natural gas in each year and substantial volumes during the five winter months. Moreover, Union proposes to use this gas to convert Hamilton, one of

the largest cities in Canada, to natural gas and to build a 24-inch pipeline to Hamilton at an estimated cost of some $22,500,000. Union made it clear that it would have to be assured that the gas from Panhandle would be available for the full 20 years.

(G) The fact that there would be an increase in "the over-all load factor of Panhandle" (Op. 292, p. 24) does not justify the proposed exportation since Panhandle's load factor would also be increased if the gas were sold to Panhandle's customers in the United States.

(H) As the Commission has repeatedly held in the past, the utility customers of Panhandle are entitled to their fair share of the gas which Panhandle may have available for sale on an interruptible basis. This refutes the statement (Op. 292, p. 21) that "in view of the volumes of interruptible gas involved, denial of the increased export deliveries would not be a substantial benefit to Panhandle's resale customers in the United States." Moreover, storage of the gas in the Howell Field would enable Panhandle to meet unsatisfied firm requirements of its utility customers.

III.

The Commission should modify Paragraph (B) of its order to require Panhandle to develop the Howell Field for storage or to show cause why it should not do so, because:

(A) The Howell Field can be readily and economically developed for storage with a working storage capacity of 18,400,000 Mcf and a peak day deliverability of 282,000 Mcf. Panhandle could store in the Howell Field all of the 15,500,000 Mcf per year it is proposing to export to Canada and Panhandle could thereby meet the unsatisfied firm requirements of its utility customers in the United States.

(B) The Commission's action is not supported by adequate findings and the Commission's findings are not supported by substantial evidence and are contrary to the evidence as previously pointed out.

(C) The evidence of Michigan Consolidated that the Howell Field can and should be developed for storage was uncontroverted. Panhandle introduced no evidence to the contrary and Panhandle previously represented to the Commission that the Howell Field was available for stor-

age. There is no evidence and the Commission has not made a finding that the Howell Field cannot be developed for storage. However, if the Commission desires additional information to determine "whether or not the Howell Field should be developed for storage" it may obtain this evidence by requiring Panhandle to show cause why it should not develop the Howell Field instead of exporting the gas to Canada.

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(D) The Commission's refusal to impose a condition relating to the development of the Howell Field for storage purposes was arbitrary and an abuse of discretion.

IV.

The Commission should modify Paragraph (B) of its order to require Panhandle before exporting any gas to Union to offer such gas under its I-1 Rate Schedule to its customers, including Michigan Consolidated because:

(A) The public interest clearly requires that this condition be imposed in Paragraph (B) of the order.

(B) The Commission's refusal to impose this condition is not supported by adequate findings. Since the Commission clearly has authority to impose this condition and has done so in the case of another utility customer of Panhandle (with the approval of the Third Circuit Court of Appeals), there is no basis for the erroneous and unsupported conclusion that such action would be "purposeless and unjustified" (Op. 292, p. 23). The Commission failed to consider the uncontroverted evidence that Michigan Consolidated could and would store at least 20 per cent of the interruptible gas received from Panhandle. In referring to the use of the interruptible gas to replace bituminous coal in Detroit (Op. 292, p. 22) the Commission

failed to consider the uncontroverted evidence that the gas to be exported will be largely used to replace anthracite coal in Canada.

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(C) The issue in these proceedings was whether Panhandle should be required to sell gas under its I Schedules before selling gas to Union. The Commission's findings that the export of gas to Canada should have priority over the sale of gas in the United States are not supported by substantial evidence and are contrary to the evidence. In prescribing the I Schedule, the Commission has determined that whatever excess gas Panhandle has available should first be offered to its existing customers in accordance with the terms of that schedule. Thus, all of Panhandle's customers have a prior call on "excess gas." The evidence of Michigan Consolidated that it has an assured market for the interruptible gas is the same character of proof upon which the Commission has repeatedly found that a market exists for interruptible gas. The fact that there is a market in Detroit for interruptible gas is also shown by the continuing attempts of Panhandle to sell large volumes of interruptible gas directly to industries in the Detroit area at unregulated rates. Contrary to the Commission's statement that denial of the export would not benefit Panhandle's resale customers in the United States (Op. 292, p. 21), the uncontradicted evidence shows that Michigan Consolidated's revenues would be substantially increased if it received the interruptible gas.

19904

(D) The Commission's refusal to impose the condition requested by Michigan Consolidated was arbitrary and an abuse of discretion.

V.

With respect to the matters upon which rehearing is sought, the Commission failed to comply with the provisions of the Administrative Procedure Act and particularly Sections 7(c), 8(b), and 9(a) of that Act.

Respectfully submitted,

MICHIGAN CONSOLIDATED GAS COMPANY
By /s/ CHARLES V. SHANNON
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19915

UNITED STATES OF AMERICA
FEDERAL POWER COMMISSION

Before Commissioners: Seaborn L. Digby, Acting Chairman; Frederick Stueck and Arthur Kline.

IN THE MATTERS OF

Docket Nos. G-1705, G-1937, G-2433, G-2475 and G-8665

PANHANDLE EASTERN PIPE LINE COMPANY

Docket No. G-8471

VILLAGE OF FRANKLIN, ILLINOIS

Docket No. G-8526

CITY OF HICKMAN, KENTUCKY

Docket No. G-8664

TRUNKLINE GAS COMPANY

Docket No. G-8771

CITY OF CLINTON, KENTUCKY

Docket No. G-8888

CITY OF LACENTER, KENTUCKY

Docket No. G-8939

CITY OF BARDWELL, KENTUCKY

Docket No. G-8962

CITY OF WICKLIFFE, KENTUCKY

Docket No. G-8963

LAKE COUNTY UTILITY DISTRICT

Order Denying Applications for Rehearing and Requests for Stay

(Issued August 23, 1956)

On July 30, 1956, applications for rehearing of the Commission's Opinion No. 292 and accompanying order issued in the above-entitled proceedings on June 30, 1956, were filed by Central West Utility Company (Central West); City of Detroit, Michigan (Detroit); County of Wayne, Michigan (Wayne County); and Michigan Consolidated Gas Company (Michigan Consolidated).

Central West's application, with which there is coupled a request for stay, is addressed to the single issue of the Commission's determination that under the provisions of the Natural Gas Act (Act) the Commission could not require, as a condition to authorizing the enlargement of the ten laterals involved in Docket No. G-2433, the enlargement of another lateral, the Liberty Lateral, so as to eliminate discrimination claimed to exist on the Liberty Lateral against Central West. The Commission's opinion and order complained of contains a full discussion of the statutory provisions and judicial decisions which required the Commission's determination in this regard and in view thereof, Central West's contention that there is no substantial evidence to support the Commission's finding that Panhandle is willing to conform to the provisions of the Act should be rejected.

19916

The applications of Detroit, Wayne County and Michigan Consolidated, which also include requests for stay of pertinent parts of Opinion No. 292 and accompanying order, are addressed to substantially the same issues and may be considered together. These parties' principal contentions are first, that authorizing Panhandle to export increased volumes of gas to Canada for sale to Union is not

consistent with the public interest within the meaning of Section 3 of the Act and is contrary to the congressional intent since Panhandle's existing customers in this country need gas (of which it is said there is already a shortage on the systems of Panhandle and Trunkline), and since the export authorization impairs Panhandle's ability to meet those needs; second, that the gas to be exported could be stored in Panhandle's Howell Field and that Panhandle should be required to develop the field to meet its customers' needs; and third, that before Panhandle is permitted to export any additional gas to Canada, the authorizations granted it should be conditioned to require Panhandle first to offer such gas under its I-1 Rate Schedule to Michigan Consolidated in volumes up to 100,000 Mcf of natural gas per day on an interruptible basis.

Michigan Consolidated, which seeks gas under the I-1 Rate Schedule, is the only customer of Panhandle which has objected to the exportation of gas to Canada as authorized in Opinion No. 292 and accompanying order, or which contends that the exportation will or may impair Panhandle's ability to render service to its customers in this country. The applications of Detroit and Wayne County likewise pray that of Panhandle's many customers, the Commission require the sale of gas to Michigan Consolidated only, under the I-1 Rate Schedule. Likewise, as to the authorization for the Howell Field, it appears that applicants advocate this development principally to facilitate the requested Michigan Consolidated sale.

None of Panhandle's other customers has expressed any of the fears voiced by Michigan Consolidated of the possibility of impairment of service, and we cannot assume that the export authorization would endanger Panhandle's service to them. On the contrary, the facts respecting Panhandle's service to its existing domestic customers convince us that no such threat exists. Of course this is a matter

of judgment, but the conclusion is based upon a close and continuing study and contact with facts and conditions over some considerable time and thus is probably as accurate as any such forecast can be.

Thus the question whether the Canadian sale will impair Panhandle's ability to serve its customers, the adequacy of its gas supply, the feasibility of the Howell Field, and the other matters asserted in the applications for rehearing are raised here and need be considered here only in relation to the sale which Michigan Consolidated requests under the I-1 Rate Schedule. And the question of the authorization of that sale

hinges in turn on whether Michigan Consolidated has shown that the imposition of the condition it requests, that Panhandle be required to sell and deliver the additional volumes of gas to Michigan Consolidated is required by the public convenience and necessity under Section 7(e) of the Act. Absent such a showing, there is no basis for the requested condition nor occasion for further inquiry into the matters otherwise concerned with the sale.

We have already determined that Michigan Consolidated has not sufficiently met the requirements of public convenience and necessity to justify the imposition of the condition it seeks authorizing the sale under the I-1 Rate Schedule. The findings supporting that determination are set forth *in extensio* in Opinion No. 292 and need not be repeated. This being so, there obviously is no occasion for engaging in any discussion of whether or not the Canadian export would interfere with a sale which there is no basis for authorizing in any event. Nor is there occasion for further discussion respecting matters pertinent only to such a sale.

Additionally, as to the Howell Field, the sale to Michigan Consolidated would be an interruptible sale whereas the

basic purpose of the storage project would be to provide firm gas so that from this point of view also the requirements of that sale do not provide a sufficient justification for attempting to require Panhandle against its judgment to undertake a project which it is doubtful we could directly require it to carry out involuntarily in any event.

Finally there was, of course, no attempt to "weigh" the end uses of gas in Canada in applying Section 3, as applicants contend. We observed merely that "There is no boiler fuel use proposed by Panhandle and thus we are not approving a type of use for export which we do not favor for domestic purposes." In any event, the authorization for this exportation of gas is fully supported without reference or regard to this factor. We are unable to conclude that the circumstances of this case would support a finding that the exportation to Canada will not be consistent with the public interest.

The Commission further *finds:*

The grounds for rehearing and specifications of error alleged in the above-described applications do not present any questions of fact or law which either were not fully considered by the Commission when it adopted the order complained of, or which having now been considered warrant any change in, or modification, of

such order. Nor do applicants' contentions justify a stay of the said opinion and order or any part thereof.

The Commission *orders:*

The said applications for rehearing are hereby denied.

By the Commission.

LEON M. FUQUAY,
Secretary.

5/12/54

PANHANDLE EASTERN PIPE LINE COMPANY
Market Data
Annual Requirements by Classes of Service

Direct Industrial Customers	Type of Service	MMCF (Millions of Cu. Ft.) @ 14.73 psia					
		Actual			Estimated		
		1951	1952	1953	1956	1957	1958
Indiana							
Anchor Hocking Glass Corporation	Firm & Interruptible	1 583.5	1 599.8	1 674.6	1 679.2	1 674.6	1 674.6
Brockway Glass Company	Firm & Interruptible	101.8	350.7	395.3	396.4	395.3	395.3
Clay City Pipe Company							
Mecca	Interruptible	-	-	-	255.7	255.0	255.0
Montezuma	Interruptible	-	-	-	146.4	146.0	146.0
E. I. DuPont deNemours & Company	Interruptible	115.3	85.9	111.5	111.8	111.5	111.5
Total Indiana		1 800.6	2 036.4	2 181.4	2 589.5	2 582.4	2 582.4
Ohio							
General Motors Corporation - Central Foundry Division	Interruptible	-	129.9	483.0	484.3	483.0	483.0
Glass Fibers, Inc.	Interruptible	-	177.2	464.5	465.8	464.5	464.5
Total Ohio		-	307.1	947.5	950.1	947.5	947.5
Michigan							
Albion Malleable Iron Company	Interruptible	227.4	250.4	276.6	277.4	276.6	276.6
Bohn Aluminum & Brass Corporation	Interruptible	-	38.1	360.8	361.8	360.8	360.8
Corning Glass Works	Interruptible	481.4	621.1	776.1	778.2	776.1	776.1
Michigan Seamless Tube Company	Firm & Interruptible	162.3	215.9	338.8	339.7	338.8	338.8
Monroe Paper Products Company	Dump	-	-	-	366.0	365.0	365.0
Mueller Brass Company	Interruptible	8.0	180.3	456.7	458.0	456.7	456.7
Total Michigan		879.1	1 305.8	2 209.0	2 581.1	2 574.0	2 574.0
Total Direct Industrial (a)		13 073.5	18 192.1	20 294.2	30 210.9	30 128.6	30 128.6
Total Main Line Requirements - East of Liberal		228 544.5	296 271.6	301 055.8	368 901.8	377 545.1	382 147.0
Company Use - West & East of Liberal (a)		23 469.0	20 795.2	22 426.3	31 292.6	31 705.2	31 735.1
Unaccounted For - West & East of Liberal (a)		2 596.1	1 086.4	2 789.7	3 427.4	3 502.1	3 527.5

Note: (a) Obtained from records of Panhandle or estimated by Panhandle.
(b) Years 1951 thru 1953 obtained from Gas Service Company's completed Questionnaire, and Years 1956 thru 1958 based on abandonment of service.

Volumes shown for GS and SGS Customers obtained from Customers' completed Questionnaires covering Annual Gas Supply from Panhandle for the Years 1951, 1952, 1956 and 1957. Year of 1953 obtained from records of Panhandle, and Year of 1958 estimated by Panhandle (except as noted herein).